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TABLE OF CONTENTS—VOL I.

PAGE.
American Medical Association Meeting—Frst day, ... 235
A Case of Extrophy of the Bladder—C. H. McGill, M.D., ... 117
Asthma, Treatment by Nitric Acid—Houston, M.D., ... 145
American Medical Biography—Editor, ... 260
American Medical Association Meeting—Third day, ... 291
Abbreviations and Explanations used in Meterological Table. 445
Bromide as an Antidote to Zymotic Poisons, and its application to treatment of Hospital Gangrene 220
Bloody Flux.... 48
Bibliographical Notices.... 161
Bellevue Hospital, N. Y. City—by Editor, ... 284
Constitution and By-laws of State of Texas Medical Society. 200
Cholera Epidemica—Diarrhœa Hydoryzea, ... 83
Cash Subscribers, January, 1866.... 64
Cerebro Spinal Meningitis—By Editor, ... 130
Case of Doubtful Sex, ... 142
Case of Doubtful Diagnosis, resulting in death—By Surgeon L. Travers, U.S.N. 167
Chloroform as an Internal Remedy—By A. P. Merrill, M.D , N.Y., ... 169
Called Meeting of Galveston Medical Society—C. H. McGill, Secretary 281
Cholera in the City 335
Cholera in New York—By Prof. Hamilton 343
Diseases affecting the System, ... 117
Diarrhœa Hoemarrhœgia, Bloody Flux—By Editor. 48
Dengue, complicated with Yellow Fever.... 166
Disenfectants, and how to use them—Advised by the Metropolitan Board of Health N. Y. City—E. Clark, Editor, ... 167
Dr. N. R. Bozeman, ... 283
Dr. Graham's Report of State Lunatic Asylum, ... 393
Dr. J. T. Heard on Cholera, ... 329
Death from Asiatic Cholera—By Surgeon L. Travers, U.S.N.,.... 462
Epidemics, or Asiatic Cholera, ... 83
Extrophy of the Bladder—C. H. McGill, M.D., ... 113
Editorial, ... 375
Febris—Fever—Editor, ... 26
Febris Congestiva, Congestiva Fever—Editor,.... 27
Febris Intermittens and Remittens, " 92
Febris Thphus Icterodes—Yellow Fever," 163
Fistula in Perino, " 55
Fort Bend County Medical Society, ... 282
Febris Remittens—Remittent Fever, ... 350
Galveston City, ... 122
"   Medical Society, January Meeting, ... 62
"   "   "   Preamble and Constitution, ... 5
"   "   "   By-Laws, ... 9
"   "   "   Fee Bill, ... 10
"   "   "   List of Members, ... 13
"   "   "   Code of Ethics, ... 15
"   "   "   College Professors, ... 31
"   "   "   "   Class of 1865—1866, &c., ... 63
"   "   Topography—By Editor, ... 123
Gonorrhea—By Editor, ... 254
Hernia—Rupture, continued from Nov.,.... 449
Intermitten and Remitten—By Salisbury, ... 83
Knife for Microscopic Sections,.... 288
Letter from A. P. Merrill, M.D., New York,.... 155
"   "   "   "   "   " 165
"   "   Bennett Dowler, M.D., New Orleans, ... 64

CONTENTS.

Letter from Dr. Farnes on Yellow Fever, ... 171
Local Items—Cholera, Remittent Fever, Yellow Fever, &c., ... 334
Letter from A. P. Merill, New York, ... 341
" " Dr. Walker, Tyler, Texas, ... 345
" " " Kirkpatrick, Homer, Texas, ... 340
Law in relation to State Lunatic Asylum, ... 400
Miscarriage, Retention of Placenta—By Editor, ... 52
Miscellaneous Improvements, " 160
Medical Facts and Observations, " 261
Messrs Tiemann & Co., New York, " 288
Medical Creeds, " 371
" College, " 372
Managers' Report State Lunatic Asylum, ... 390
Molluscum Contagiosum 471
New York and her Hospitals—By Editor, ... 286
" " Hospital, " 286
" " Academy of Medicine, Informal Meeting, ... 319
New Form of the Journal—By Editor, ... 369
" Remedies, their Use, Dose, &c.—By Editor, ... 407
" Treatment of Hernia, " 458
Our Prospects, " 62
On the Cause of Intermittents and Remittents—Editor, ... 67
Occlusion Vagina, ... 143
On the Treatment of Infantile Hydrocephalus, ... 145
" " Wounds of Palmer Arch, ... 154
" " Polypoid Growths in the Rectum. 201
Preamble and Constitution of Galveston Medical Society 5
Pacchionian Bodies not found in a Lunatic—Editor, ... 59
Protection from Small Pox by Vaccination and Revaccination, ... 240
Prize Essay on the Pathology of Jaundice 338
Permanent Cure of Reducible Hernia—By G. Haywood, M.D., ... 317
Practical Observations in Opthalmology—By E. Williams, M.D., ... 463
Paracentesis Cornea, ... 467
Quack Medicines 378
Retention of Placenta after Miscarriage, ... 52
Report of Island City Hospital for 1865—By Editor, ... 55
Rheumatic Fever, the Blister treatment, ... 55
Report of Committee of American Medical Association on the Introduction of Disease by Commerce—Editor, ... 230
Rare Book 267
Report on Pressure in Gonorrheal Opthalmia 268
Reduction of Inverted Uterus of seven years standing—By T. A. Emmett, ... 256
Record of Post-mortem examination at the Island City Hospital—By J. J. Hanna, ... 337
Report on Puerperal Tetanus, Transactions American Medical Association, ... 377
Salutatory—Editor, ... 4
Spleen—Anatomy, Physiology, Pathology, and Treatment, ... 109
Surgeon-General A. R. Barnes, ... 290
State Lunatic Asylum, Austin, Texas—Editor. 380
Superintendent's Report, Lunatic Asylum, ... 392
Treatment of Varicose Veins by Button Suture 185
" " Zymotic Diseases—By Dr. D. Rissi, ... 117
Trichina and Trichinosis, ... 191
Treatment of Cholera—Metropolitan Board of Health, N.Y., ... 167
The Academy of Medicine, N.Y., ... 286
The President of the Board of Health, N.Y., Dr. E. P. Harris, ... 280
The Laryndoscope, ... 298
The Blind Asylum, N.Y., ... 289
The Episcopal Hospital, Philadelphia, ... 290
Unguentum Citrina Rubrum or Brown Citrine Ointment, ... 470
Variocose Veins, Treatment of Dr. Bozeman 185
Variola (Umbillaticæ) Small Pox—Editor, ... 211
Wills Hospital, Philadelphia—Editor, ... 289
Yellow Fever—Febris Icterodes " 163
" " Houston, in 1838, " 164
" " " 338

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The paper on Cholera was suggested by the arrival of that disease at New York, and is designed to refreshen our memories upon this fearful disease.

We desire similar papers from all our practical physicians, and shall, from time to time, insert others of the same character, if we do not receive better ones from our personal friends and the friends of this Journal.

The apology for inserting so much of our own opinions in this number is, that we have not published a prospectus, and it has been undertaken solely on personal responsibility.

In our next number we hope to have some valuable translations from foreign Journals; but up to this time we have received none, and did not desire to have any old papers in this number.

The JOURNAL for February will be issued early in January, and all who wish to contribute will please send in their manuscripts as soon as possible.

Being a member of the "Medical Faculty of Soule University," we would solicit patronage for that Institution. Like this Journal, it is just being inaugurated, but under very favorable auspices. The members of the Faculty—excepting our humble self—are able Practitioners of Medicine; though the most of them are untried teachers. It does not become us to speak more fully of them, and we refer our readers to the announcement in another part of this number.

November 23, 1865. EDITOR.

PREAMBLE AND CONSTITUTION

OF THE

Galveston Medical Society.

Resolution Ordering Publication.

It was moved and seconded that the President appoint a Committee to publish the Constitution, By-Laws, Code of Medical Ethics, and Fee Bill of the Society ; which was carried.

Whereupon, the President appointed Drs. Dowell, Campbell and Lancton the said Committee.

Preamble.

We, the physicians of the City and County of Galveston, desirous of promoting that harmony, kind feeling, and that "*esprit du corps*" which ought to obtain among those engaged in the same professional pursuits ; and desirous, also, of employing every means of mutual improvement, by the communication of facts and the discussion of opinions on subjects connected with the Science of Medicine, do hereby agree to form a Society, and to that end do adopt the following Constitution and By-Laws.

Constitution.

ARTICLE I.

This Society shall be called the MEDICAL SOCIETY OF GALVESTON.

ARTICLE II.

The officers of this Society shall consist of a President, Vice President, Secretary, Corresponding Secretary, Treasurer, and three Censors, whose duties shall be defined by the By-Laws, who shall be elected by ballot at the annual meeting in January of each year, and shall hold their offices until others are elected.

ARTICLE III.

This Society shall be composed of regular Physicians and Surgeons only, having diplomas from a regularly constituted Medical College, recognized as such by the American Medical Association. All Physicians and Surgeons of this and other States, and of foreign countries, may be admitted as honorary members.

ARTICLE IV.

All members shall be elected by ballot at the regular meetings, and by a vote of two-thirds of all the members present. After election, each member shall sign this Constitution and pay the initiation fee before he shall be entitled to participate in the proceedings of the Society.

ARTICLE V.

This Society adopts and shall enforce the Code of Medical Ethics of the American Medical Association.

ARTICLE VI.

This Society shall adopt and keep a common seal, and shall give each of its members a sealed Diploma of Membership, signed by the President and Secretary. The seal shall also be used in all official documents of the Society.

ARTICLE VII.

The Society shall meet annually on the first Tuesday of January of each year, and semi-annually on the first Tuesday of July, and monthly on the first Tuesday of each month, except January and July. The President shall also call special meetings of the Society whenever requested to do so in writing by any three members.

ARTICLE VIII.

Any member may be expelled from this Society for immoral or unprofessional conduct by a vote of two-thirds of the members present at any regular meeting : *Provided*, the members present be a majority of all the members of the Society ; *provided also*, that the member accused shall have received notice in writing from the Secretary of the nature of the charge or charges, and by whom made, one month previous to trial, unless such notice shall be waived by the party accused.

ARTICLE IX.

This Constitution may be amended at any annual or semi-annual meeting by a vote of two-thirds of the members present ; *provided*, that notice of such proposed amendment be given at the monthly meeting previous. The By-Laws may be amended at any regular meeting by a vote of two-thirds of the members present ; *provided*, notice of the proposed amendment be given one month before.

ARTICLE X.

The members of this Society shall pay an initiation fee of not less than two dollars ($2 00), nor more than ten dollars ($10 00), and an annual fee of not less than one dollar ($1), nor more than five dollars ($5), to be fixed by the By-Laws. All other funds used by the Society shall be raised by voluntary contributions from its members.

ARTICLE XI.

It shall be the duty of this Society to collect books, pathological specimens, and other objects of interest and value in a scientific point of view, and it shall be the duty of the Treasurer to take charge of and preserve them for the common benefit of the Societ

ARTICLE XII.

Regular Physicians, not members of this Society, may be invited to be present at its meetings; also all Apothecaries having diplomas from a regular school of Pharmacy; and all students of Medicine who are pupils of any regular Physician in this city or county.

Greensville Dowell, M. D.,
S. M. Welch, M. D.,
Alfred Jones, M. D.,
} *Committee on Constitution.*

Adopted by the Society at a regular meeting on the 17th of July, 1865.

By-Laws.

ARTICLE I.

Five members shall constitute a quorum for the transaction of business, but a less number may meet and adjourn.

ARTICLE II.

The debates and proceedings of the Society, in its meetings, shall be conducted according to parliamentary usage.

ARTICLE III.

It shall be the duty of members of this Society to cultivate the science of Pathological Anatomy, by making post mortem examinations in all proper cases, and by preserving the morbid specimens for the benefit of the Society. They shall also keep a record of all important cases that may occur in their practice, and all facts of peculiar interest connected with the science and practice of Medicine, and report the same.

ARTICLE IV.

No money shall be drawn from the Treasurer but by vote of the Society, approved, or order signed, by the President and countersigned by the Secretary.

ARTICLE V.

Honorary members may be elected at any regular meeting of the Society by a vote of two-thirds of the members present.

ARTICLE VI.

It shall be the duty of the President to preside at all meetings of the Society ; but in his absence the Vice President shall preside.

ARTICLE VII.

It shall be the duty of the Secretary to make and preserve, in a book kept for the purpose, a record of the proceedings of each meeting, and to file and preserve all addresses, reports of cases and essays ; shall receive all moneys of the Society ; shall pay them over to the Treasurer and take his receipt for the same.

ARTICLE VIII.

It shall be the duty of the Corresponding Secretary to record (in a book kept for that purpose) all essays, reports of cases, and addresses, and return them to the Society for safe keeping ; to do all the foreign correspondence of the Society.

ARTICLE IX.

The Treasurer shall safely keep the funds of the Society, subject to orders as before mentioned, and shall submit a full statement of his account at each annual meeting. It shall also be his duty to take charge of and preserve all the property, such as books, pathological specimens, etc., and make an annual report of the number and condition of the same.

ARTICLE X.

It shall be the duty of the Board of Censors, in general terms to apply and enforce the Code of Ethics adopted in the Constitution. They shall examine the diplomas, or proofs of diplomas, of all applicants for membership, and report on the same to the Society; they shall also, among their other duties, be required to interpose their best endeavors to cause a friendly reconciliation whenever apprised of any misunderstanding which may unfortunately occur between members of this Society.

ARTICLE XI.

Every member shall be required either to deliver an address, write an essay, or report a case, at least once in each year, and in default of so doing shall be fined the sum of $5.

ARTICLE XII.

Candidates for membership shall be proposed at least one month previous to their admission.

ARTICLE XIII.

The Initiation Fee shall be five dollars, ($5). The Annual Fee shall be five dollars, ($5).

ARTICLE XIV.

This Society shall adopt a Fee-Bill in accordance with the recommendation of paragraph I, of Article VIII, of the Code of Medical Ethics of the American Medical Association.

ARTICLE XV.

The Fee Bill of the Society shall be as follows, specie being the standard:

Fee Bill of Galveston Medical Society.

Item	1.	Where a patient is visited but once	$	5 00
"	2.	Visit in day time		3 00
"	3.	Visit at night		6 00
"	4.	Where the condition of the patient is such as to detain the Physician above one hour, for every additional hour		5 00
"	5.	When called up to prescribe at night		5
'	6.	Consultation, to be charged but once in same case		10
"	7.	Reducing simple luxation of superior extremities	$10 00 to	30
"	8.	" " " " the lower "	20 00 to	100

“ 9.	Setting simple Fracture of the Clavicle	20 00 to	30 00
“ 10.	“ “ “ “ “ Humerus	25 00 to	30 00
“ 11.	“ “ “ “ “ Fore Arm		25 00
“ 12.	“ “ “ “ “ Fingers		10 00
“ 13.	“ “ “ “ “ Ribs		10 00
“ 14.	“ “ “ “ “ Jaw		25 00
“ 15.	“ “ “ “ “ Thigh		50 00
“ 16.	“ “ “ “ “ Leg		25 00
“ 17.	“ “ “ “ “ Patella		25 00
“ 18.	Amputation of the Shoulder		200 00
“ 19.	“ “ “ Arm		100 00
“ 20.	“ at “ Hip-Joint	$100 00 to	500 00
“ 21.	“ of “ Leg		150 00
“ 22.	“ “ “ Finger or Toe		20 00
“ 23.	Reducing Hernia by taxis from	$ 25 00 to	50 00
“ 24.	Operations for Hernia (Strangulated) from	100 00 to	500 00
“ 25.	“ for radical cure of Hernia from	100 00 to	500 00
“ 26.	“ for Fistula in Perineo from	50 00 to	500 00
“ 27.	“ “ “ “ Ano from	25 00 to	250 00
“ 28.	“ “ “ “ Lachrymalis from	50 00 to	75 00
“ 29.	“ “ Cataract single Eye from	75 00 to	200 00
“ 30.	“ “ “ both Eyes from	100 00 to	500 00
“ 31.	“ “ Pterygium		25 00
“ 32.	“ “ Strabismus		100 00
“ 33.	Etirpation of the Eye		
“ 34.	“ “ Testes		100 00
“ 35.	Tumours	50 00 to	500 00
“ 36.	Amputation of Uvula		10 00
“ 37.	Incisions in Paronychia	5 00 to	15 00
“ 38.	Treatment of strictures of Uretha	25 00 to	100 00
“ 39.	Opening Abcess		5 00
“ 40.	Reducing Prolapsus Ani	10 00 to	25 00
“ 41.	Poracentesis Abdominis		25 00
“ 42.	“ Thoracis		30 00
“ 43.	“ Vesicis		50 00
“ 44.	Operation for single Hair Lip	25 00 to	50 00
“ 45.	“ “ Phymosis		25 00
“ 46.	“ “ Paraphymosis	25 00 to	50 00
“ 47.	Operation for radical cure of Hydrocele	25 00 to	75 00
“ 48.	Inserting Seton		15 00
“ 49.	Dividing Frenum Linguæ		10 00
“ 50.	Removing foreign bodies from Fauces	10 00 to	20 00
“ 51.	Surgical attention after operation, extra		
“ 52.	Treatment for Gonorrhœa		25 00
“ 53.	“ “ Syphilis		50 00
“ 54.	Lithotomy	200 00 to	00 00
“ 55.	Tracheotomy		100 00
“ 56.	Trephining		100 00
“ 57.	Operations for Nasal Polypus	25 00 to	300 00
“ 58.	Dressing wounds at office	5 00 to	10 00
“ 59.	Ligature of Arteries of Arm and Fore-Arm	20 00 to	50 00
“ 60.	“ “ “ “ Thigh and Leg	30 00 to	60 00
“ 61.	“ “ Carotid Arteries	50 00 to	100 00
“ 62.	“ “ Iliac Arteries, external and internal	100 00 to	300 00

OBSTETRICS.

“ 63.	Ordinary Labor		30 00
“ 64.	Protracted cases at option of Physician		
“ 65.	Cases requiring instruments or turning	50 00 to	500 00
“ 66.	Subsequent attention after second day same as other visits		

" 67. Office Advice	2 00 to	5 00
" 68. For prescriptions to more than one member of a family, each		2 00

" 69. No families or individuals are to be taken by the year...........
" 70. All bills considered due after the patient is cured or Physician discharged.
" 71. All bills are recommended to be presented and collected immediately after last sickness.

E. Randall, M. D.,
J. B. O. Lancton, M. D.,
Marcus Campbell, M. D.,
Committee on Fee Bill.

Adopted by the Society, Oct. 1st, 1865.

ARTICLE XVI.

Order of Business.

The following shall be the order of business observed at the annual and semi-annual meetings of the Society.

1. Roll of Members called.
2. Reading proceedings of the last annnal, semi-annual and monthly meetings.
3. Reading Treasurer's Report for preceding year.
4. Reports of Committees and unfinished business appearing on record.
5. Reports of cases and interesting facts.
6. Miscellaneous business.
7. Essays, and Discussion on same.
8. Election of Officers for the ensuing year.
9. Reading Code of Medical Ethics.
10. An Address from the retiring President.

ARTICLE XVII.

Order of Business at Monthly Meetings.

1. Roll of Members called.
2. Reading proceedings of last meeting.
3. Reports of Membership.
4. Admission of Members.
5. Reading of Statistical Reports.
6. Reports of Committees and unfinished business.
7. Reports of Cases and interesting facts.
8. Miscellaneous Business.
9. Topics for discussion, Essays and Papers.

Errata.—Article XIV of the By-Laws should be Article "XIII" of the Constitution.

List of Members of the Galveston Medical Society.

NAME.	WHERE GRADUATED.	YEAR.	POSITION.
JAMES NAGLE,	London Med. Col., 1823, Dublin,	1827,	*President.*
T. J. HEARD, M. D,	Med. Dep. University La., A. D.	1845	*Vice President.*
S. M. WELCH, M. D.,	Jefferson Medical College, Pa.	1855	*Secretary.*
C. H. McGILL, M. D.,	Kentucky School of Med., Ky.,	1856	*Corresponding Secretary.*
MARCUS CAMPBELL,	Jefferson Med. Col., Pa.,	1860	*Treasurer.*
GREENSVILLE DOWELL,	Jeff. Med. Col., Pa. 1847, Nashville,	1860	*Censor.*
EDWARD RANDALL,	Med. Dep. of Univ. of La.,	1849	“
J. B. O. LANCTON,	Canada East, Mont. Med. Col.,	1854	“
VICTOR FRIEDEMAN,	Montpellier, 1836, Göttengen,	1837	*Member.*
CHAS. W. TRUEHEART,	Richmond Med. College,	1864	“
THOS. A. STANWOOD,	Cincinnati Medical College,	1864	“
ALFRED JONES,	Jefferson Medical College, Pa.,	1836	“
I. N. KERR,	Winchester College, Va.	1850	“
J. HANNAY,	Berkshire Medical Institute	1825	“

Code of Ethics

OF THE AMERICAN MEDICAL ASSOCIATION, ADOPTED MAY, 1847.

CHAPTER I.

OF THE DUTIES OF PHYSICIANS TO THEIR PATIENTS, AND OF THE OBLIGATIONS OF PATIENTS TO THEIR PHYSICIANS.

ARTICLE I.

Duties of Physicians to their Patients.

1. A physician should not only be ever ready to obey the calls of the sick, but his mind ought also to be imbued with the greatness of his mission, and the responsibility he habitually incurs in its discharge. Those obligations are the more deep and enduring, because there is no tribunal other than his own conscience to adjudge penalties for carelessness or neglect. Physicians should, therefore, minister to the sick with due impressions of the importance of their office ; reflecting that the ease, the health and lives of those committed to their charge, depend on their skill, attention, and fidelity. They should study, also, in their deportment, so to unite *tenderness* with *firmness*, and *condescension* with *authority*, as to inspire the minds of their patients with gratitude, respect, and confidence.

2. Every case committed to the charge of a physician should be treated with attention, steadiness, and humanity. Reasonable indulgence should be granted to the mental imbecility and caprices of the sick. Secrecy and delicacy, when required by peculiar circumstances, should be strictly observed ; and the familiar and confidential intercourse to which physicians are admitted in their professional visits, should be used with discretion, and with the most scrupulous regard to fidelity and honor. The obligation of secrecy extends beyond the period of professional services ; none of the privacies of personal and domestic life, no infirmity of disposition or flaw of character observed during professional attendance, should ever be divulged by him except when he is imperatively required to do so. The force and necessity of this obligation are indeed so great, that professional men have, under certain circumstances, been protected in their observance of secrecy by courts of justice.

3. Frequent visits to the sick are in general requisite, since they enable the physician to arrive at a more perfect knowledge of the disease, to meet promptly every change which may occur, and also tend to preserve the confidence of the patient. But unnecessary visits are

to be avoided, as they give useless anxiety to the patient, tend to diminish the authority of the physician, and render him liable to be suspected of interested motives.

4. A physician should not be forward to make gloomy prognostications, because they savor of empiricism, by magnifying the importance of his services in the treatment or cure of the disease. But he should not fail, on proper occasions, to give to the friends of the patient timely notice of danger when it really occurs; and even to the patient himself, if absolutely necessary. This office, however, is so peculiarly alarming when exercised by him, that it ought to be declined whenever it can be assigned to any other person of sufficient judgment and delicacy. For, the physician should be the minister of hope and comfort to the sick; that, by such cordials to the drooping spirit, he may soothe the bed of death, revive expiring life, and counteract the depressing influence of those maladies which often disturb the tranquility of the most resigned in their last moments.. The life of a sick person can be shortened, not only by the acts, but also by the words or the manner of a physician. It is, therefore, a sacred duty to guard himself carefully in this respect, and to avoid all things which have a tendency to discourage the patient and to depress his spirits.

5. A physician ought not to abandon a patient because the case is deemed incurable; for his attendance may continue to be highly useful to the patient, and comforting to the relatives around him, even in the last period of a fatal malady, by alleviating pain and other symptoms, and by soothing mental anguish. To decline attendance, under such circumstances, would be sacrificing to fanciful delicacy and mistaken liberality, that moral duty which is independent of and far superior to all pecuniary consideration.

6. Consultations should be promoted in difficult or protracted cases, as they give rise to confidence, energy, and more enlarged views in practice.

7. The opportunity which a physician not unfrequently enjoys of promoting and strengthening the good resolutions of his patients, suffering under the consequences of various conduct, ought never to be neglected. His counsels, or even remonstrances, will give satisfaction, not offence, if they be proffered with politeness, and evince a genuine love of virtue, accompanied by a sincere interest in the welfare of the person to whom they are addressed.

ARTICLE II.

Obligations of Patients to their Physicians.

1. The members of the medical profession, upon whom is enjoined the performance of so many important and arduous duties towards the community, and who are required to make so many sacrifices of comfort, ease, and health, for the welfare of those who avail themselves of their services, certainly have a right to expect and require that their patients should entertain a just sense of the duties which they owe to their medical attendants.

2. The first duty of a patient is to select as his medical adviser one who has received a regular professional education. In no trade or occupation do mankind rely on the skill of an untaught artist; and in medicine, confessedly the most difficult and intricate of the sciences, the world ought not to suppose that knowledge is intuitive.

3. Patients should prefer a physician whose habits of life are regular, and who is not devoted to company, pleasure, or to any pursuit incompatible with his professional obligations. A patient should also confide the care of himself and family, as much as possible, to one physician, for a medical man who has become acquainted with the peculiarities of constitution, habits and predispositions of those he attends, is more likely to be successful in his treatment, than one who does not possess that knowledge.

A patient who has thus selected his physician, should always apply for advice in what may appear to him trivial cases, for the most fatal results often supervene on the slightest accidents. It is of still more importance that he should apply for assistance in the forming stage of violent diseases: it is to a neglect of this precept that medicine owes much of the uncertainty and imperfection with which it has been reproached.

4. Patients should faithfully and unreservedly communicate to their physician the supposed cause of their disease. This is the more important, as many diseases of a mental origin simulate those depending on external causes, and yet are only to be cured by ministering to the mind diseased. A patient should never be afraid of thus making his physician his friend and adviser; he should always bear in mind that a medical man is under the strongest obligations of secrecy. Even the female sex should never allow feelings of shame or delicacy to prevent their disclosing the seat, symptoms and causes of complaints peculiar to them. However commendable a modest reserve may be in the common occurrences of life, its strict observance in medicine is often attended with the most serious consequences, and a patient may sink under a painful and loathsome disease, which might have been readily prevented had timely intimation been given to the physician.

5. A patient should never weary his physician with a tedious detail of events or matters not appertaining to his disease. Even as relates to his actual symptoms, he will convey much more real information by giving clear answers to interrogatories, than by the most minute account of his own framing. Neither should he obtrude upon his physician the details of his business nor the history of his family concerns.

6. The obedience of a patient to the prescriptions of a physician should be prompt and implicit. He should never permit his own crude opinions, as to their fitness, to influence their attention to them. A failure in one particular may render an otherwise judicious treatment dangerous, and even fatal. This remark is equally applicable to diet, drink, and exercise. As patients become convalescent, they are very apt to suppose that the rules prescribed for them may be disregarded, and the consequence but too often is a relapse. Patients should never

allow themselves to be persuaded to take any medicine whatever that may be recommended to them by the self-constituted doctors and doctresses who are so frequently met with, and who pretend to possess infallible remedies for the cure of every disease. However simple some of their prescriptions may appear to be, it often happens that they are productive of much mischief, and in all cases they are injurious, by contravening the plan of treatment adopted by the physician.

7. A patient should, if possible, avoid even the *friendly visits of a physician* who is not attending to him—and when he does receive them, he should never converse on the subject of his disease, as an observation may be made, without any intention of the interference, which may destroy his confidence in the course he is pursuing, and induce him to neglect the directions prescribed to him. A patient should never send for a consulting physician without the express consent of his own medical attendant. It is of great importance that physicians should act in concert; for, although their modes of treatment may be attended with equal success when employed singly, yet conjointly they are very likely to be productive of disastrous results.

8. When a patient wishes to dismiss his physician, justice and common courtesy require that he should declare his reason for so doing.

9. Patients should always, when practicable, send for their physician in the morning, before his usual hour of going out; for, by being early aware of the visits he has to pay during the day, the physician is able to apportion his time in such a manner as to prevent an interference of engagements. Patients should also avoid calling on their medical adviser unnecessarily during the hours devoted to meals or sleep. They should always be in readiness to receive the visits of their physician, as the detention of a few minutes is often of serious inconvenience to him.

10. The patient should, after his recovery, entertain a just and enduring sense of the value of the services rendered him by his physician; for those are of such character, that no mere pecuniary acknowledgment can repay or cancel them.

CHAPTER II.

OF THE DUTIES OF PHYSICIANS TO EACH OTHER, AND TO THE PROFESSION AT LARGE.

ARTICLE I.

Duties for the Support of Professional Character.

1. Every individual, on entering the profession, as he becomes thereby entitled to all privileges and immunities, incurs an obligation to exert his best abilities to maintain its dignity and honor, to exalt its standing, and extend the bounds of its usefulness. He should,

therefore, observe strictly such laws as are instituted for the government of its members; should avoid all contumelious and sarcastic remarks relative to the faculty, as a body; and while, by unwearied diligence, he resorts to every honorable means of enriching the science, he should entertain a due respect for his seniors, who have by their labors brought it to the elevated condition in which he finds it.

2. There is no profession, from the members of which greater purity of character and a higher standard of moral excellence are required, than the medical; and to attain such eminence, it is a duty every physician owes alike to his profession and to his patients. It is due to the latter, as without it he cannot command their respect and confidence, and to both, because no scientific attainments can compensate for the want of correct moral principles. It is also incumbent upon the faculty to be temperate in all things, for the practice of physic requires the unremitting exercise of a clear and vigorous understanding; and, on emergencies, for which no professional man should be unprepared, a steady hand, an acute eye, and an unclouded head may be essential to the well-being and even to the life of a fellow-creature.

3. It is derogatory to the dignity of the profession to resort to public advertisements, or private cards, or handbills, inviting the attention of individuals affected with peculiar diseases—publicly offering advice and medicine to the poor, gratis, or promising radical cures; or to publish cases and operations in the daily prints, or suffer such publications to be made; to invite laymen to be present at operations; to boast of cures and remedies; to adduce certificates of skill and success, or to perform any other similar acts. These are the ordinary practices of empirics, and are highly reprehensible in a regular physician.

4. Equally derogatory to professional character is it for a physician to hold a patent for any surgical instrument, or to dispense a secret *nostrum*, whether it be the composition or exclusive property of himself or others. For if such nostrum be of real efficacy, any concealment regarding it is inconsistent with beneficence and professional liberality; and if mystery alone give it value and importance, such craft implies either disgraceful ignorance or fraudulent avarice. It is also reprehensible for physicians to give certificates attesting the efficacy of patent or secret medicines, or in any way to promote the use of them.

ARTICLE II.

Professional Services of Physicians to each other.

1. All practitioners of medicine, their wives, and their children, while under the paternal care, are entitled to the gratuitous services of any one or more of the faculty residing near them, whose assistance may be desired. A physician afflicted with disease is usually an incompetent judge of his own case; and the natural anxiety and soli-

citude which he experiences at the sickness of a wife, a child, or any one who by the ties of consanguinity is rendered peculiarly dear to him, tend to obscure his judgment, and produce timidity and irresolution in his practice. Under such circumstances, medical men are peculiarly dependent upon each other, and kind offices and professional aid should always be cheerfully and gratuitously afforded. Visits ought not, however, to be obtruded officiously, as such unasked civility may give rise to embarrassment, or interfere with that choice on which confidence depends. But if a distant member of the faculty, whose circumstances are affluent, request attendance, and an honorarium be offered, it should not be declined; for no pecuniary obligation ought to be imposed which the party receiving it would wish not to incur.

ARTICLE III.

Of the Duties of Physicians as respects various Offices.

1. The affairs of life, the pursuit of health, and the various accidents and contingencies to which a medical man is peculiarly exposed, sometimes require him temporarily to withdraw from his duties to his patients, and request some of his professional brethren to officiate for him. Compliance with his request is an act of courtesy which should always be performed with the utmost consideration for the interest and character of the family physician, and when exercised for a short period, all the pecuniary obligations for such service should be awarded to him. But if a member of the profession neglect his business in quest of pleasure and amusement, he cannot be considered as entitled to the advantages of the frequent and long continued exercise of its fraternal courtesy, without awarding to the physician who officiates, the fees arising from the discharge of his professional duties.

In obstetrical and important surgical cases, which give rise to unusual fatigue, anxiety, and responsibility, it is just that the fees accruing therefrom should be awarded to the physician who officiates.

ARTICLE IV.

Of the Duties of Physicians in regard to Consultations.

1. A regular medical education furnishes the only presumptive evidence of professional abilities and acquirements, and ought to be the only acknowledged right of an individual to the exercise and honors of his profession. Nevertheless, as in consultations the good of the patient is the sole object in view, and this is often dependent on personal confidence, no intelligent regular practitioner, who has a license to practice from some medical board of known and acknowledged respectability, recognized by this Association, and who is in good moral and professional standing in the place in which he resides, should be fastidiously excluded from fellowship, or his aid refused in consultation, when it is requested by the patient. But no one can be considered as a regular practitioner, or a fit associate in consultation, whose

practice is based on an exclusive dogma, to the rejection of the accumulated experience of the profession, and of the aids actually furnished by anatomy, physiology, pathology, and organic chemistry.

2. In consultations, no rivalship or jealousy should be indulged; candor, probity, and all due respect should be exercised towards the physician having charge of the case.

3. In consultations, the attending physician should be the first to propose the necessary questions to the sick; after which the consulting physician should have the opportunity to make such further inquiries of the patient as may be necessary to satisfy him of the true character of the case. Both physicians should then retire to a private place for deliberation; and the first in attendance should communicate the directions agreed upon to the patient or his friends, as well as any opinions which it may be thought proper to express. But no statement or discussion of it should take place before the patient or his friends, except in the presence of all the faculty attending, and by their common consent; and no *opinions* or *prognostications* should be delivered, which are not the result of previous deliberation and concurrence.

4. In consultations, the physician in attendance should deliver his opinion first; and when there are several consulting, they should deliver their opinions in the order in which they have been called in. No decision, however, should restrain the attending physician from making such variations in the mode of treatment, as any subsequent unexpected change in the character of the case may demand. But such variation and the reason for it ought to be carefully detailed at the next meeting in consultation. The same privilege belongs also to the consulting physician if he is sent for in an emergency, when the regular attendant is out of the way, and similar explanations must be made by him at the next consultation.

5. The utmost punctuality should be observed in the visits of physicians when they are to hold consultation together, and this is generally practicable, for society has been considerate enough to allow the plea of a professional engagement to take precedence of all others, and to be an ample reason for the relinquishment of any present occupation. But as professional engagements may sometimes interfere, and delay one of the parties, the physician who first arrives should wait for his associate a reasonable period, after which the consultation should be considered as postponed to a new appointment. If it be the attending physician who is present, he will of course see the patient and prescribe; but if it be the consulting one, he should retire, except in case of emergency, or when he has been called from a considerable distance, in which latter case he may examine the patient, and give his opinion in *writing*, and *under seal*, to be delivered to his associate.

6. In consultations, theoretical discussions should be avoided, as occasioning perplexity and loss of time. For there may be much diversity of opinion concerning speculative points, with perfect agreement in those modes of practice which are founded, not on hypothesis, but on experience and observation.

7. All discussions in consultations should be held as secret and confidential. Neither by words nor manner should any of the parties to a consultation assert or insinuate that any part of the treatment pursued did not receive his assent. The responsibility must be equally divided between the medical attendants—they must equally share the credit of success as well as the blame of failure.

8. Should an irreconcilable diversity of opinion occur when several physicians are called upon to consult together, the opinion of the majority should be considered as decisive ; but if the numbers be equal on each side, then the decision should rest with the attending physician. It may, moreover, sometimes happen, that two physicians cannot agree in their views of the nature of the case, and the treatment to be pursued. This is a circumstance much to be deplored, and should always be avoided, if possible, by mutual concessions, as far as they can be justified by a conscientious regard for the dictates of judgment. But in the event of its occurrence, a third physician should, if practicable, be called to act as umpire, and if circumstances prevent the adoption of this course, it must be left to the patient to select the physician in whom he is most willing to confide. But as every physician relies upon the rectitude of his judgment, he should, when left in the minority, politely and consistently retire from any further deliberation in the consultation, or participation in the management of the case.

9. As circumstances sometimes occur to render a *special consultation* desirable, when the continued attendance of two physicians might be objectionable to the patient, the member of the faculty whose assistance is required in such cases, should sedulously guard against all future unsolicited attendance. As such consultations require an extraordinary portion both of time and attention, at least a double honorarium may be reasonably expected.

10. A physician who is called upon to consult, should observe the most honorable and scrupulous regard for the character and standing of the practitioner in attendance ; the practice of the latter, if necessary, should be justified as far as it can be, consistently with a conscientious regard for truth, and no hint or insinuation should be thrown out which could impair the confidence reposed in him, or affect his reputation. The consulting physician should also carefully refrain from any of those extraordinary attentions or assiduities, which are too often practiced by the dishonest for the base purpose of gaining applause, or ingratiating themselves into the favor of families and individuals.

ARTICLE V.

Duties of Physicians in Cases of Interference.

1. Medicine is a liberal profession, and those admitted into its ranks should found their expectations of practice upon the extent of their qualifications, not on intrigue or artifice.

2. A physician, in his intercourse with a patient under the care of

another practitioner, should observe the strictest caution and reserve. No meddling inquiries should be made; no disingenuous hints given relative to the nature and treatment of his disorder; nor any course of conduct pursued that may directly or indirectly tend to diminish the trust reposed in the physician employed.

3. The same circumspection and reserve should be observed when, from motives of business or friendship, a physician is prompted to visit an individual who is under the direction of another practitioner. Indeed, such visits should be avoided, except under peculiar circumstances, and when they are made, no particular inquiries should be instituted relative to the nature of the disease, or the remedies employed, but the topics of conversation should be as foreign to the case as circumstances will admit.

4. A physician ought not to take charge of or prescribe for a patient who has recently been under the care of another member of the faculty in the same illness, except in cases of sudden emergency, or in consultation with the physician previously in attendance, or when the latter has relinquished the case, or been regularly notified that his services were no longer desired. Under such circumstances no unjust and illiberal insinuations should be thrown out in relation to the conduct or practice previously pursued, which should be justified as far as candor and regard for truth and probity will permit; for it often happens that patients become dissatisfied when they do not experience immediate relief, and, as many diseases are naturally protracted, the want of success, in the first stage of treatment, affords no evidence of a lack of professional knowledge and skill.

5. When a physician is called to an urgent case, because the family attendant is not at hand, he ought, unless his assistance in consultation be desired, to resign the care of the patient to the latter immediately on his arrival.

6. It often happens, in cases of sudden illness, or of recent accidents and injuries, owing to the alarm and anxiety of friends, that a number of physicians are simultaneously sent for. Under these circumstances, courtesy should assign the patient to the first who arrives, who selects from those present any additional assistance that he may deem necessary. In all such cases, however, the practitioner who officiates should request the family physician, if there be one, to be called, and, unless his further attendance be requested, should resign the case to the latter on his arrival.

7. When a physician is called to the patient of another practitioner, in consequence of sickness or absence of the latter, he ought, on the return or recovery of the regular attendant, and with the consent of the patient, to surrender the case.

8. A physician, when visiting a sick person in the country, may be desired to see a neighboring patient who is under the regular direction of another physician, in consequence of some sudden change or aggravation of symptoms. The conduct to be pursued on such an occasion is to give advice adapted to present circumstances; to interfere no

further than is absolutely necessary with the general plan of treatment; to assume no future direction, unless it be expressly desired; and in this last case, to request an immediate consultation with the practitioner previously employed.

9. A wealthy physician should not give advice *gratis* to the affluent; because his doing so is an injury to his professional brethren. The office of a physician can never be supported as an exclusively benificent one; and it is defrauding, in some degree, the common funds for its support, when fees are dispensed with which might justly be claimed.

10. When a physician who has been engaged to attend a case of midwifery is absent, and another is sent for, if delivery is accomplished during the attendance of the latter, he is entitled to the fee, but should resign the patient to the practitioner first engaged.

ARTICLE VI.

Of Differences Between Physicians.

1. Diversity of opinion, and opposition of interest, may, in the medical, as in the other professions, sometimes occasion controversy and even contention. Whenever such cases unfortunately occur, and cannot be immediately terminated, they should be referred to the arbitration of a sufficient number of physicians, or a *court-medical.*

As peculiar reserve must be maintained by physicians towards the public in regard to professional matters, and as there exist numerous points in medical ethics and etiquette through which the feelings of medical men may be painfully assailed in their intercourse with each other, and which cannot be understood or appreciated by general society, neither the subject matter of such differences nor the adjudication of the arbitrators should be made public, as publicity in a case of this nature may be personally injurious to the individuals concerned, and can hardly fail to bring discredit on the faculty.

ARTICLE VII.

Of Pecuniary Acknowledgements.

1. Some general rules should be adopted by the faculty, in every town or district, relative to *pecuniary acknowledgments* from their patients; and it should be deemed a point of honor to adhere to these rules with as much uniformity as varying circumstances will admit.

CHAPTER III.

OF THE DUTIES OF THE PROFESSION TO THE PUBLIC, AND OF THE OBLIGATIONS OF THE PUBLIC TO THE PROFESSION.

ARTICLE I.

Duties of the Profession to the Public.

1. As good citizens, it is the duty of physicians to be ever vigilant

for the welfare of the community, and to bear their part in sustaining its institutions and burdens: they should also be ever ready to give counsel to the public in relation to matters especially appertaining to their profession, as on subjects of medical police, public hygiene, and legal medicine. It is their province to enlighten the public in regard to quarantine regulations—the location, arrangement, and dietaries of hospitals, asylums, schools, prisons, and similar institutions; in relation to the medical police of towns, as drainage, ventilation, etc.; and in regard to measures for the prevention of epidemic and contagious diseases; and when pestilence prevails, it is their duty to face the danger, and to continue their labors for the alleviation of suffering, even at the jeopardy of their own lives.

2. Medical men should also be ready, when called on by the legally constituted authorities, to enlighten coroners' inquests and courts of justice on subjects strictly medical—such as involve questions relating to sanity, legitimacy, murder by poisonous or other violent means, and in regard to the various other subjects embraced in the science of Medical Jurisprudence. But in these cases, and especially where they are required to make a post-mortem examination, it is just, in consequence of the time, labor and skill required, and the responsibility and risk they incur, that the public should award them a proper honorarium.

3. There is no profession by the members of which eleemosynary services are more liberaly dispensed than the medical, but justice requires that some limits should be placed to the performance of such good offices. Poverty, professional brotherhood, and certain public duties referred to in Section 1 of this Chapter, should always be recognized as presenting valid claims for gratuitous services; but neither institutions endowed by the public or by rich individuals, societies for mutual benefit for the insurance of lives, or for analogous purposes, nor any profession or occupation can be admitted to possess such privilege. Nor can it be justly expected of physicians to furnish certificates of inability to serve on juries, to perform militia duty, or to testify to the state of health of persons wishing to insure their lives, obtain pensions, or the like, without a pecuniary acknowledgment. But to individuals in indigent circumstances, such professional services should always be cheerfully and freely accorded.

4. It is the duty of physicians, who are frequent witnesses of enormities committed by quackery, and the injury to health and even destruction of life caused by the use of quack medicines, to enlighten the public on these subjects, to expose the injuries sustained by the unwary from the devices and pretensions of artful empirics and impostors. Physicians ought to use all the influence which they may possess, as professors in colleges of Pharmacy, and by exercising their option in regard to the shops to which their prescriptions shall be sent, to discourage druggists and apothecaries from vending quack or secret medicines, or from being in any way engaged in their manufacture and sale.

ARTICLE II.

Obligations of the Public to Physicians.

1. The benefits accruing to the public directly and indirectly from the active and unwearied beneficence of the profession, are so numerous and important, that physicians are justly entitled to the utmost consideration and respect from the community. The public ought likewise to entertain a just appreciation of medical qualfications ; to make a proper discrimination between true science and the assumptions of ignorance and empiricism—to afford every encouragement and facility for the acquisition of medical education—and no longer to allow the statute-books to exhibit the anomaly of exacting knowledge from physicians, under liability to heavy penalties, and making them obnoxious to punishment for resorting to the only means of obtaining it.

FEBRIS.—Fever.

Febris is a generic term, but I shall limit it to those cases that are marked by the following symptoms :

First Stage.—Marked by a depression of the pulse, which lasts for a more or less limited time—from a few minutes, as in simple Febris Intermittens Quotidiana, or for several hours, as in Febris Congestiva.

Second Stage.—Marked by reaction—increase of pulse—heat of skin, sometimes very dry and again very moist—from a slight moisture to large drops on the surface.

Third Stage.—Depression of the pulse, remission of fever, or entire intermission. This may last for a few hours, as in simple Febris Remittens, or for three long days, as in Febris Intermittens Quotidiana.

These changes may occur several times, as in all the forms of Febris Intermittens ; or these symptoms may only occur once in the disease, as in Febris Typhus Icterodes—(Yellow Fever.) Again these stages may all run into each other and not be appreciable to the attendant or patient. Rigors occur with heat of skin ; again, coldness of skin, with intense heat felt by patient.

In all cases the blood is changed in its constituent elements. There is a decrease of fibrin from 3 in 1-1000 to 2 or 1,50. No organs are specially affected in all cases, but any one is liable to be congested and influenced during the disease.

Patients, in simple cases, pass through all the different stages without producing any appreciable organic change. In malignant cases the disease may settle on any of the vital organs and produce disorganization and consequently death.

Specific Causes.—Of these very little is positively known, and of those that are known, or even probable, we will speak when we come to the special disease.

Exciting Cause.—May be the same in all kinds of fever, viz : Intemperance in eating or drinking, starvation, gluttony, exhaustion from labor or inordinate exercise, changes of temperature, vicissitudes of heat or cold, improper clothing, unusual changes of dress, heat of the sun, exposure to rain, mental anxiety, hunger, thirst, venerial excesses. or any thing that will depress or excite to an unusual degree the circulation of the blood.

No stage of incubation known. The severity of the attack is dependant upon the strength of the remote cause and the nervous depression of the exciting cause—neither the remote or exciting cause appreciable in many cases.

FEBRIS CONGESTIVA.—Congestive Fever.

Having said thus much upon fevers in general, we will now speak of fevers specifically—beginning with that form of malarial fever that is the most malignant.

Febris Congestiva is a periodical disease, and is known from the other forms of periodcal fever alone by its severity. A simple attack of Remittens or Intermittens may be suddenly converted into Congestive; and there are congestive types of Febris Typhus Icterodes, Febris Typhoides, and Febris Typhus, but I will limit the fever I am now about to describe to those forms that assume a periodical character, and are strictly malarial or marsh fevers.

Diagnostic Symptoms.—Great depression of the vital forces, pulse weak and feeble, skin cold as death, sighing respiration, breath cold—patient does not feel any pain, sighs deeply—says he is burning up—frequently puts out his tongue—great thirst—jactitation—complains of a sinking away sensation. These symptoms last for several hours, and is followed with reaction—high fever, delirium, very dry skin, or skin may be moist with great drops of perspiration over the face and hands; pulse full and quick, from one hundred to so many you cannot count them. Patient does not notice anything, talks incoherently, seems sometimes to understand you and will often answers your questions in an indifferent manner. If you give him medicine, he will often spirt it out over his bed, on his nurse, or whatever may be near him. Does not seem to see any one. This stage may be so severe that the patient will be entirely unconscious—will not move, but will lay for hours in a comatose condition—passes his stools involuntarily. His skin, around the body, will be very hot, almost burning, and his feet and hands cold—pulse often becomes imperceptible. These symptoms may go off in 24 hours, and the patient become again conscious, or there may be a slight remission. There may be about the same hour of the day another return of the cold stage, and there will always be an increase of heat, if the disease is not modified by treatment—in which case the fever may not be so high nor last so long as the day before. If the fever that has preceded this attack has been quotidian or tertian, we may look for these changes on the next or second day at precisely the same hour. But without treatment the cold stage is liable and will usually come on two hours earlier. Under treatment it may be delayed two hours. These paroxysms may continue from day to day, but if the first day's attack is as severe as I have described, we may expect a fatal result at the third paroxysm. Without treatment the patient often dies in the first paroxysm, more liable on the second, and almost certainly fatal on the third.

There are many forms of this fever, but the above is the type. In many cases there is no perceptible cold stage, or it has occurred in a former chill, not being noticed. Often the stomach is very irritable. Intense thirst—water is not tolerated. *The mind is generally clear* where the stomach and bowels are principally involved. Sometimes the attack comes on with chronic diarrhœa and vomiting, resembling Asiatic Cholera, with white foamy discharges—sparkling like beer or white, soft and flakey-like soft soap. Thre is in these cases great enlargement of the spleen—great tenderness over the epigastric region. General rigor, even sufficient to shake the bed and sometimes the room. Another form is, where the congestion settles on the lungs. These cases are known by oppression, very quick pulse, difficulty in breathing, a sense of suffocation or smothering sensation, sometimes expectoration of blood. These cases are usually followed by excessive heat of skin and regular Pneumonitis, if not relieved during the stage of congestion, and is most liable to occur in the cold seasons of the year—Fall, Winter and Spring. The paroxysms will be regular as in those of the brain and bowels. Patient is liable to be delirious, but not entirely unconscious, which hardly ever occurs in the first or second paroxysm. I say paroxysm, and chill, for often there is no chill, either subjectively or objectively—either to patient himself or to physician ; and this should be recollected, for nine out of ten cases seen by physicians will not be recognized by these *peculiar symptoms* I say peculiar, because we presume that there is always a stage of depression, though it may not make itself known to patient or physician by any notable sign. There may be hæmorrhage from the bowels or hæmeturia, which is usually very alarming to the patient, but not so serious as delirium.

Treatment.—In congestion of the brain, with hot skin, apply cold water to the head—ice water if it can be had. If not, pour such as can be had on the head, until it is so cold the patient becomes conscious—bleed from the temporal arteries, if they are injected and throbbing. Do not open the arteries unless the pulse is strong and full, and never take blood from the general system unless the whole body is hot and the pulse strong. Never bleed in the cold stage, or use cold douche or cold bath. Apply cups to temples and nape of the neck. If feet and hands are cold, apply mustards and cord the legs and the arms close to the body with a strong string. It relieves the congestion of the brain and warms the feet by preventing the venous blood from returning to the heart, but does not stop the blood from passing to the extremities through the arteries. If the patient be speechless, whether cold or hot, give him from V to X grs. of Hydrargirum Chloridum Mitis (Calomel) every two or three hours with loaf sugar. Put it on his tongue and wash it down with teaspoonfuls of water. Do not give enough water to strangle.

Keep up these powders until you relieve the brain, and the patient becomes conscious or is partially ptyalised, which will never take place until the brain is relieved. When the patient becomes conscious begin immediately with Quinine, from V to X grs. every hour, until the head roars or is perfectly under its influence, and then keep him under its influence until the time for his paroxysm has passed several hours.

In congestion of the stomach, with excessive vomitings, draw a blister directly over the stomach and liver, and before the next paroxysm apply about XX grs. of Quinine over the blistered surface, and repeat it in two hours, unless the patient feels the effects, and keep it up for hours after the paroxysm has passed. If you do not have time to draw a blister, give the Quinine in an injection of warm water, with about XX guttura of Tinc Opei (Laudanum), not with starch, mucilage or gruel, for they prevent the quick absorption of the medicine. In these cases the pure Calomel, with loaf sugar, is better than any combination that can be made, as it will be more easily retained by the stomach ; and even if there is constant vomiting some will be retained and you will finally succeed in relieving the liver and stomach. Where the lungs are congested add Dover's Powder to the Calomel, about equal parts, and when the gums become sore, or the lungs relieved, move the bowels effectually with II oz. of Olei Ricini (Castor Oil) and I oz. of Olei Terebinthinæ (Spt. Turp.) If this does not act in two hours, repeat, and so on until you have accomplished your object. This done, give Quinine pills, one every hour, until quinism is obtained, and continue its effects as in congestion of the brain and stomach. In conjestion of the bowels, with frequent purging of white stools or blood, add pure Opium or Morphine to the Calomel, and if this is not sufficient to quiet the bowels apply a blister and give injections of Tinc. Opii and warm water where there is no hæmorrhage, and cold water where there is hæmorrhage.

In no form of congestion is purging of any benefit, and often in congestion of the brain I have seen patients die with spasms or in a comatose state, that were perfectly conscious before they were purged. This should *be particularly guarded against*, for you want the mercurial action, and when that is produced the bowels will move of themselves, or from the action of the Calomel alone. I have had patients sitting up and seen them take a simple dose of Castor Oil and in one hour take spasms and die. When I did not move the bowels in similar cases the patients recovered. When you remove the irritation from the bowels, it returns to the brain and the congestion is renewed, and the inflammation increased, or carried to effusion in the brain, then the patient dies. I do not regard convulsions as very serious until after the 5th day, when, if they occur, the patient rarely recovers. If the congestion is not relieved by that time, inflammation is set up and finally effusion of the brain takes place and the case is hopeless. I have made many post-mortem examinations in these cases and I have always found the brain soft and creamy in some part of its convolutions with effusion. This is the only form of congestive fever that I fear ; for in all cases where the mind of the patient is clear you can save the patient by the above indicated means. The main point is to quinine the patient thoroughly before the next day, or the returning paroxysm. When the brain is much congested this cannot be done; you may give from II to LX grs. at a dose, and you cannot stop the paroxysms, but will only make the feet and hands cold and the patient more restless, and retard the action of the Calomel; but we should not wait in any instance for the fever to abate, much less cease, before we use quinine—for without it many patients would never cool except with death. And I have never seen it do any permanent injury. I have seen children made perfectly blind by over doses, but they always recovered their sight perfectly; and I have seen partial deafness produced, which would last for days, yet all have finally recovered. The point should be to make the ears roar as soon as possible, and then keep them so until all danger of a paroxysm is over, which can be done by smaller doses or at longer intervals. Give both mercurials and quinine in their natural state, as nigh as it can be done, to get it down the patient. Never use pills; for I have seen them retained undissolved for three days in the stomach and bowels, either vomited up or passed through entirely undissolved. In mild cases of congestion of the stomach you may get pills to stay by giving them covered with wafers of dough, or, what is better, the hulls of raisins, squeezing out the pulp and putting the pill in its place. This must not be relied on if there is still vomiting, but you must resort immediately to the blister and quinine or the quinine injections. When the paroxysm is once broken then you can take time to correct the secretions by milder means and build up the constitution by mild tonics and good diet. There is no disease that requires more prompt and efficient treatment than congestive fever. There is no time for experiment or for expectant treatment. The patient will surely die if you do not help him. The means are simple and few, but must be administered in efficient doses, and in quick time. Mercury and quinine will (alone) cure the worst cases, if you have time to apply them; but you must keep the patient alive by other means, to give them time to act. In the cold cases, where the breath is cold, I have used Oil of Capsici, rubbed over the entire body with brandy, or Tinc. Capsici Compositi (No. 6), or anything that will stimulate. I once brought a little negro girl to consciousness by taking the hot smoothing iron with which the mother was ironing clothes, and applying it to the soles of the feet and calves of the legs until it blistered, after mustard had failed to make any impression. I once saved a negro man by opening the temporal artery, when I believed he was in the convulsions of death. He came too as the blood ran out and cried, "there! there! I am easy now," and was sitting up in bed the next day. I once saved a young man by giving him pills of quinine in raisin hulls, when water would not stay on his stomach, and he was both salivated and blistered. I did not have time for injections or for the application of quinine on the blister. He did not vomit after the first pill was given, and he had repeatedly tried to swallow the solution and quinine in pills without the covering. I gave V gr. pills every half hour, until six were taken. I saved my own son in congestion of the bowels by a quinine bath when I could not get injections to be retained, and he could not swallow quinine in solution or in pills. I put him in every half hour for 10 hours, and only kept him in just two minutes. In this way I made his head sing and kept it singing for 14 hours. I was saved myself in an attack of congestion of the stomach by blisters and seven mustard plasters kept on all day, and my brother-in-law to keep my hands under the cover. I could not swallow water, and the quinine over the blisters could not be applied in time, and injections were not tried. When I reacted I was nearly a solid blister, as all the mustards took off the skin, and I had them down my back—on my hands and feet, and a blister over my stomach and on the nape of the neck. The fourth day after reaction I was as near the lower regions as I have ever been, and *hope I ever shall be.* The skin came off from between the tendons on my legs and arms, and I had great sores on my breast and abdomen. I believe I should have died but for these severe counter irritants. I was then a student of medicine in Raleigh, Tennessee, and the use of quinine endemically was not known, and that by injection never practiced by the physicians of my acquaintance. My mind was perfectly clear, and I distinctly remember every thing.

I have said but littte of the pathology of this disease, though I have made many post mortems of all the varieties I have spoken of in this paper, except those of Hæmeturea. In those of the brain, as I said before, portions were softened, if the patient lived over the fifth day—much injected with venous blood, nearly black, in the membranes, where they died before the third day—and adhesive attachments after the third day. In the cases of congestion of the stomach the liver was indurated if the patients died in the first three days, and softened and indurated after this time. The stomach was nearly natural in many cases—in others much injected with blood and filled with greenish black fleculent matter. Frequently found pilis of quinine and calomel in the stomach and bowels undissolved. In congestion of the lungs—in the first three days lungs very black and would not collapse, were as full out as if blown up with wind—portions injected with puss after this time, other portions black and hard. In congestion of the bowels, nearly the same as that of the stomach, with red patches in the intestines and abrasions in the mucus coat, and sometimes hæmorrhagic points. I never made a post-mortem in a case where there was hæmeturia, nor have I attended a case that died, but I have heard of several deaths with this prominent symptom.

Prognosis is favorable in all cases except in congestion of the brain, and of these I have usually saved two out of three. I never feel uneasy if my patient is conscious, and I can have time to administer the proper remedies. All forms are certainly fatal without treatment prompt and active. I knew a lady sit up and pour off coffee for her family at breakfast and die before night, before any medical assistance could be obtained. I have known patients to be at work when the chill was on them, and when fever rose become delirious. I have known attacks to come on in the convalescence from acute diseases and prove fatal in a few hours, hence the great importance of giving quinine as a tonic in malarial districts, when there has been no chill to give us warning. If the stoutest negro man breaks his leg in the Mississippi or Brazos bottoms, and you have to confine him and keep him on low diet, he will have chills and high fever, which will soon run into congestion, and they will die comatosed; hence, now, I almost invariably give mild mercurials and quinine as prophylactics, especially if they have had periodic fever at any time before the accident.

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CHOLERA EPIDEMICA—Hydoryzea Diarrhœa.

Epidemic or Asiatic Cholera—Rice-water Diarrhœa.

We have just received the report that this dreadful scourge has reached our shores on the steamship Atlantic, and that she was sent to the N. Y. quarantine grounds with some sixty cases on board ; and being aware that it has been advancing west for the last ten months, we may again expect it to become epidemic throughout the American Continent ; at least throughout the U. S. We deem it important that every physician should be well instructed in the Causes, Symptoms, Treatment, and General Habits of this disease; so we have thought we could not do better than to give a succinct account of this epidemic disease, and also all the improvements made in its prevention and treatment during the two former epidemics. This disease commenced its ravages in India where it had existed for several centuries, and in 1830 it began to spread west, and by slow but sure steps continued to advance, when in 1831 it had reached London, and in 1832 was epidemic in the U. S. During this epidemic about one half of those who took it died. It again commenced in India in 1847, and advanced as before, reaching London in the summer of 1848, and the U. S. in the winter of '48 and '49, and continued epidemic for four years in various towns in the U. S., and became sporadic in 1853, and continued on the Mississippi river until 1857, when it entirely disappeared, and since which time we have not even heard of it on this continent until the present; but, judging from the past, we presume it will soon become epidemic in all our principal cities.

Cause and Symptoms.—As to its specific cause, very little is known. It originated in the malarial districts of the East, and was supposed to be produced from damaged rice, as it appeared on the rice fields, and is peculiarly *a Rice-watery Diarrhœa,* and not a choleraic or bilious diarrhœa, as its usual name would indicate. There *is no bile in the discharges,* but the principal and most important symptom is the profuse rice-watery stools; hence I have taken the liberty to name the disease "*Diarrhœa Hydoryzea,*" (Rice-watery Flux), which the words indicate.

It usually comes on with a mild diarrhœa, which lasts from a few hours to several days, but sometimes it comes on very suddenly and without any premonitory symptom. The patient feeling as well as he ever did will have a quite natural stool, but very large, so much so that he will think that the whole contents of his bowels have passed off. Soon the stools will turn to a thin, watery, sero-mucus appearance—will flow freely and without much pain, but after a few evacuations of this character the patient will become very sick at the stomach and commence vomitting up the same kind of fluid, with severe cramps of all the voluntary muscles, especially of the legs and abdomen. The muscles of the legs become perfectly rigid, almost woody, and knotty hard. The patient assumes *a death-like appearance, the breath becomes cold, the skin cold, the eyes sunk in their sockets, the voice hoarse and gutteral—lips, fingers and toe-nails livid and bloodshotten,* which is *the stage of collapse,* from which very few recover, and these with an irritative Typhoid type of fever and a long and tedious convalescence.

The cramps sometimes are very painful, and the patient will scream with agony. After the vomiting commences the thirst is very great, and the patient will crave water and complain of great internal heat. Many will appear perfectly indifferent to their fate, though their minds are perfectly clear throughout all of its different stages. They will toss themselves from one side of the bed to the other, turn, twist and bend themselves double. I have known the muscles of the legs to become as rigid as bone and to be torn, leaving ridges; also the abdominal muscles. The patient generally dies or gets better in 24 hours, and often in six. The change for the better is indicated by the increase in the strength and clearness of the voice—the return of warmth to the skin—a general return of the blood to the external cappellaries—more quiet and less thirst—less frequent stools and less vomiting, and more consistency in the ejections.

PREVENTION, PROPHYLAXIS, PROTECTIVES, PATHOLOGICAL ANATOMY AND GENERAL TREATMENT.

PREVENTION.—*The only safe prevention is to keep out of its epidemic range—never go where there is a case, or where there has been one, in forty days.* It is beyond doubt *infectious,* if not *contagious,* as many facts have fully demonstrated. Such as the case of the Indians on the Western plains taking up the dead bodies of the California emigrants for their blankets, and thereby getting the disease amongst them. Friends coming from the country where it has never been and nursing relatives and friends in the cities where it is epidemic, several examples of which I witnessed in Memphis in 1852. One in particular, where a brother in the city had the disease and sent for his brother in the country to come and wait on him ; which he did ; and the city brother got well and the country brother took the disease and died with it. Neither heat or cold modify or change this strange disease; as it has prevailed epidemically with the thermometer below zero and above one hundred. But elevation seems to have a controlling influence over it; as it is usually worse near the sea-coast—along rivers and in low places in towns and countries. It was almost entirely confined to Bayou Gayoso in Memphis in 1852. Mountainous countries—both in the North and South have been nearly entirely exempt. Water has great influence over it. The disease has always been worse in limestone districts than where freestone or rain-water was used. Cleanliness is a great preventive. It is much worse on the poor than the rich, and many more of the poor die who take it than the rich, and the proportion of poor to rich who take it is much greater. A regular and simple diet is best. No excesses of any kind, as all excesses and debauches are prominent exciting causes. Bad food is also a great exciting cause. Shell fish should be particularly avoided. A cheerful disposition is also a good preventive—fear is a most potent exciting cause ; and if one much fears the disease he should run from it. Those who are temperate should be careful how they drink during the epidemic, but topers should take regular drinks, for deprivation becomes an exciting cause. Cities should be put in the highest state of cleanliness. No filth of any kind should be allowed—no stagnant ponds. This should be particularly attended to, as by experiments on mice it has been proven that water from the evacuations of the bowels and from the stomach given to them dried on paper will produce the disease; so we may believe water from a well or cistern where any of these discharges have entered is an excitant cause, and perhaps contains the specific cause. Dr. Riddell tells us he found the in the rice water discharges from the stomach of cholera patients, and also from the water of the Mississippi river, during the prevalence of cholera in N. Orleans and on the tributaries of the Mississippi river ; and since the disappearance of cholera these animalculæ have also disappeared. This is an important fact to sustain the animalculæ theory of its cause, which is most generally entertained at the present time. For these reasons I would recommend that every one use cistern water and be careful not to allow any water to run into the cistern were the handkerchiefs or other clothing of cholera patients have been washed or dried, especially where any faecal matter or ejections from the stomach have been thrown. Not going out by night and sleeping in upper rooms are also preventives. Masterbation is a great exciting cause amongst students, and should not be indulged. No purgative medicines should be used, for the bowels once moved may lead to cholera, especially where there is a previous disposition, which is always to be presumed.

Prophylaxis.—No medicine need be taken as a special prophylaxis, for there is none known. But if a person is in a debilitated condition, has intermittent fever, or is subject to worms, these causes should be speedily removed by their usual remedies, as they are *per se* exciting causes during an epidemic. Dyspepsia is a potent exciting cause and a patient with this disease should be very careful about his diet while under the epidemic influence. One having had the disease is no prevention of a return or a relapse, but on the contrary it is a predisposing cause. But it is a *noteworty fact* that in the last epidemic there were not so great a proportion of the inhabitants of infected districts taken with the disease as in the former epidemic, and we hope that this one will be still less. These facts seem to be contradictory, but they are supported by statistics. The least diarrhœa should be stopped at once, by mild means. Prepared chalk with opium is highly recommended by Prof. Watson.

Protectives.—There are no certain protectives. But warm clothing, good food, pure air, a cheerful heart—pure rain, condensed or distilled water, used in drinking, cooking and washing—may be considered almost certain to prevent an attack, even during a severe epidemic.

Pathology and Pathological Anatomy of Cholera.—The pathological lesions are neither uniform nor strongly marked. The Cadavera, soon after death, have muscular contractions and turn about—the heat of the skin becomes developed. Patients in hospitals are often tied to the bedsteads to prevent them from moving by muscular contractions and frightening the other patients, as they appear to be coming to life by these movements.

The body is much less in weight than before the attack. The blood is very black and thick, full of fibrin and red globules and deficient in serum—it having passed off by the discharges. The brain, heart and liver appear nearly natural. There is generally a suppression of urine, and, consequently, the bladder is nearly empty. The mucous coat of the bowels are abraded with a few hæmorrhagic points. The body appears starved to death; the skin is covered with a serous cold sweat. It is usually supposed that there are no anatomical alterations of any importance, and I believe I have mentioned all worthy of particular notice.

General Treatment.—Nearly every article in the Materia Medica has been tried in cholera, but the profession has settled down upon the following plan, dividing the disease into three stages. The first stage, usually indicated by a slight diarrhœa, may be relieved by opium, prepared chalk and sugar of lead, in equal parts—one gr. given every hour or two hours, according to the urgency of the case. I have used, with success, Tinc Opei, Tinc Capsici, each 1 dr., Qui. Sulphatis, 10 grs., given at one dose and repeated after each operation. This will stop most cases, in their primary stage, before the emesis or vomiting commences. When vomiting has commenced I have found the following to succeed in most cases:

Creosoti, X guttura;
Aquæ Cinnemoni, II oz.;

A tablespoonful every three hours, or every half hour, if the vomiting continues.

For the first and second stage the following was a favorite prescription in Lexington, Kentucky, and in Tennessee, and is *perhaps* better adapted to all cases than any other :

Hydr. Chlo. Mitis, (Calomel,) i drachm.
Pulveris Gummi Camphoris, (Pulverised Camphor,) xx grs.
Piperiti Cayennis Optimi, (best Cayenne Pepper,) xx grs.
Pulveris Opii Optimi, (best Pulverised Opium,) x grs.
Zingeri Jamacaiensis, (best Jamaica Ginger,) x grs.
Quinæ Sulphatis, (Sulphate of Quinine,) x grs.

Mix and divide into ten powders. Give one in simple syrup, washed down with good brandy or milk punch. These were repeated according to the urgency of the case. The following was much used in Memphis by myself and brother :

Opii Pulveris.
Plumbi Acetatis.
Cretæ Preparetæ, aa xxiv grs.
M. F. Chartas, No. 12.

One every two hours. This was perhaps the most prompt of all other prescriptions in checking the diarrhœa; but the solid opium was not so good as the tincture (Laudanum); for I found medicines slow in being absorbed. I found laudanum and opium much better than morphine. Morphine appeared to increase the serous effusion from the skin, and to increase the lividity of the lips and nails. I found binding the legs and arms with roller bandages covered with mustard a *good remedy* in the collapse stage. It prevented cramps, checked the perspiration, and produced counter irritation. Rubbing the body all over with warm brandy and oil of Capsicum was good. The warm bath relieved the cramps, but increased the sweating. Upon the whole, it was doubtful whether it done more good than harm. I never found injections to do much good, if any, though I tried the following :

Laudanum, ii drachms.
Acetate of Lead, x grs.
Pure water, vi oz.

Mix and use at once. Pressing on the hips for a half hour. But in most cases it would come away, and appeared to increase the straining. I let my patients take freely of powdered ice, when I could get it, and in lieu as much cold water as they wanted. I did not think it increased the vomiting, and it gratified them, and relieved, to a certain extent, their great thirst. There is in all cases a great tendency to suppression of urine, and this should be particularly attended to. I cannot speak confidently of any thing, but I used the Tinc Digitalis, x guttura, with Sweet Spr. Nitre, ss drachm; or the following :

Schnapps Schiedam, (Holland Gin,) i drachm.
Infusion of Peach Tree Leaves, ii oz.

Chloroform has been used with success, but I cannot speak of it experimentally, as I have never seen it used. Its known effect of producing vomiting has prevented me from trying it; but now, since I understand more fully its effects internally administered, I would give it a good trial. It is powerful in destroying animal life in large doses, and if the specific cause of cholera be animalculæ I should expect the best results. It will relieve the pain, and to a certain extent the cramps; but will not its seditive effect overbalance these good results. Tanner speaks highly of it in his work on practice, and Prof. Watson mentions it with favor. It may be administered with Glycerin or Sweet Oil, in the following proportion:

Chloroform, ss drachm.
Olei Olevæ, i drachm.

To be taken internally at once. Chloroform taken internally, in from half drachm to drachm doses, are not dangerous, and its effects last much longer given internally than by inhalation. Its nauseous effects appear to be owing to its impurity, containing pyrogenious oil.

Calomel has been used in every part of the world, and with success, perhaps as great as any other one remedy. It may act like chloroform in destroying the specific cause, and by preventing inflammation and equalising the circulation. It has been given in drachm doses, with reported success; but I never ventured above xx grs.; and it was not particularly relied on in dangerous cases, as I could not see its use, as all the organs were in a healthy state, or nearly so, at death.

Sulphuric Acid has also been praised, and no doubt has merit, but I have not tried it. Hot air baths are good, but I did not use them, as I was never prepared to give one in an efficient way. Cajiput Oil has been praised; I know nothing of its effects. Dr. Bushe's Cholera Mixture is very popular, and I have tried it with success, and believe it one of the best sold in shops, and would recommend that it be procured and kept on hand for immediate use.

There is another plan or system of treating cholera, which Tanner says was eminently successful, and that it is the only system "*deserving of notice*, since it is the only one based upon a scientific foundation." This plan was suggested by Dr. Stevens, of England, and used in the prison of the "Coldbath Fields," in 1832. I give Tanner's own words :

"Patients presenting the premonitory symptoms—diarrhœa and vomiting—were removed into an observation ward, where an even temperature was constantly maintained. A Seidlitz powder was immediately administered; if sinking was felt without purging, three or four teaspoonfuls of Epsom salts were added to the powder. On these agents acting, plenty of thin beef tea, well-seasoned with salt, was given; if there was any pain, a sinapism was applied to the gastric region; and thirst was relieved with seltzer, soda, or pure water, *ad libitum*. Most of the cases were thus cured. If, however, cramps, coldness, or sinking of the pulse came on, the patients were considered as cholera cases in the second degree. The following was then administered about every half hour: Sodii chloridii 20 gr., Sodæ carbonatis 30 gr., Potassæ chloratis 7 gr., dissolved in water. If there was much irritability of stomach, a large sinapism was applied; if much heat or burning pain, an additional quantity of carbonate of soda was added to the mixture. In cases in the stage of collapse, a strong solution of the same salts, dissolved in hot water (100° Fahr.), was thrown into the bowels, and repeated every two or three hours. Sinapisms were also applied to the stomach, between the shoulders, &c.; and in the cold stage, frictions with warm towels were used. Pure air for the patient to breathe was considered of the greatest importance."

Prognosis—Always unfavorable, as in the first epidemic—one half of those taken, died; and about one-tenth of the inhabitants in the infected places had it. In the second, about two-thirds died, and about one-twentieth had the disease. There died in the U. States, in 1848–9, upwards of thirty-one thousand, and was spread over portions of nearly every State and Territory. In 1849–50, there died about twenty-one thousand. During its stay in this country, on its last visitation, there died over 100,000 persons from it, and about 100,000 more from ordinary diarrhœa, as a sequence to this disease. It has never been known to go East, nor prevented by quarantine; but it can be retarded and delayed by THIS means, which I think important, as it seems to have a periodic limit, and all who escape during that time are safe. There was an interval between the two former epidemics from 1835 to 1848. The first lasted, in the U. S., from 1831 to 1835 (3 years), and then re-appeared in India in 1846, and reached London in 1847, and the U. S. in 1848. It has again broken out in India after a period of nineteen years (1846–65), and has just reached our shores, (Nov. 7, New York, after an absence from 1857 to 1865, (eight years,) in which we have not heard a report of a single case. Judging from the past, in less than 60 days it will be in all our seaport towns, and we may expect about one in every thirty persons will have it, and of this number about one in five will die. How far this ratio will be changed by the sanitary laws, and the improvements in treatment, will have to be seen. Much can be done by cleanliness, and I would advise all cities and towns to enforce sanitary laws to the farthest extent the law will allow, and to have their places well drained. All privies cleaned out—all ditches opened—all ponds drained—all rubbish removed, (especially old bones and rags.) *Filth is the most powerful of all exciting causes, and greatly increases the mortality.* One plain proof of this is, that nearly all insane persons die who take it, and but few ever escape ; when they are nearly entirely exempt from other diseases. They are the most filthy of any class of human beings, and a greater proportion die than of any other class. Negroes are more liable to the disease than whites, and Indians than Negroes, and a greater proportion also die. Children are more liable than adults, and a greater proportion die. These are propositions that require further investigation, and we ask all physicians to keep notes.

The Medical College of Galveston.

The Trustees are pleased to notify the public, that the Medical Department of Soule University has been moved to Galveston, and that they have secured the services of an able Faculty. Owing to the change from Chappell Hill to Galveston, the Faculty had to be reformed, as some of those first appointed could not move to this city. The Professors, upon consultation, concluded to drop the chair of *Clinical Medicine and Auscultation and Percussion*, and incorporate it in the other chairs, and have adopted the plan of delivering a course of Clinical Lectures on Surgery and the Practice of Medicine, at the Island City and Marine Hospital, twice a week, to-wit: On each Wednesday and Saturday from 11 o'clock A. M. to 1 o'clock P. M. They have made these lectures the means of conferring on all the poor of the city, who are not able to pay a physician, medical treatment, free of charge, except for medicines. These lectures will be delivered by each of the Professors by turns, until all have lectured at least one month. The introductory lectures have already commenced, but the regular course will commence on Monday, the 1st of December next, and continue until the 1st Wednesday in April following.

The Faculty, as now organized, which we believe will be permanent and harmonious, stands thus:

N. N. ALLEN, A M., M. D., Professor of Surgery.
GREENSVILLE DOWELL, M. D., Professor of Anatomy.
W. H. GANTT; M. D., Professor of Physiology and Pathological Anatomy.
JOHN L. WATKINS, M. D., Professor of Theory and Practice of Medicine.
J. BORING, M. D., Prof. of Obstetrics and Dis. of Women and Children.
D. FORT. SMYTHE, Professor of Chemistry.
JOHN H. WEBB, M. D., Prof. of Materia Medica and Therapeutics.
CHAS. W. TRUEHEART, M. D., Demonstrator of Anatomy.
JOHN H. WEBB, Dean of Faculty.

The Professors have entered upon their duties with zeal, and are bound to succeed. They are (except two) all citizens of Galveston. After the present session it is expected they will all become permanent residents. Students will be allowed to matriculate up to the 1st of January next, but it is desired that they will come forward at once and take a complete course.

GAB. FELDER, *President Trustees.*

JAS. M. PRESSLER, *Secretary Trustees.*

GALVESTON, 30th Nov., 1865.

☞ Having received the above announcement since our cover was printed, we gladly insert the above, and hope the practitioners of the State will encourage this enterprise. Our own connection with this school was entirely unexpected a few weeks since, and the articles for the present number were in print before we received our appnintment as Professor of Anatomy. Though connected with this school, the Journal will be independent, and stand on its own merits. We expect assistance from all the Professors, but will remain sole Editor.

THE
Galveston Medical Journal.

Vol. I. FEBRUARY, 1866. No. 2.

Diarrhœa Hæmorrhœgica.

(BLOODY FLUX.)

GENERAL HISTORY.

THIS disease is the great scourge of the Southern States. When I commenced the practice of Medicine in Panola County, Miss., in 1847, this was the most fatal disease of the country. When I returned to Memphis in 1852, I found it prevailing in the country around Memphis, both in Tennessee and Arkansas, and when I settled on the Brazos, in Brazoria County, I found it the scourge of the large plantations. It is common in Galveston, and the City Hospital is never free from it. It was the pest of our armies, and it is the most fatal disease that has occurred in the English armies in the East Indies. It prevails at all seasons of the year, and at all temperatures. It attacks young and old, rich and poor. It is often epidemic in different districts; sporadic cases are occasionally occuring.

It is *infectuous when epidemic* ; it is worse in malarial districts than in high and healthy districts. In wet and warm weather, than in dry and cold, in spring; and autum, than summer or winter.

SYMPTOMS.

The name we have given it, is its diagnostic symptom, *a bloody flow*—as Asiatic Cholera is a rice-water flow (Diarrhœa Hydoryzea), the one is bloody, the other seems like rice. In most instences the discharges are very painful, and attended with a cramping in the Gastrocnemic muscles, (calves of the legs), a blanching of the face, more or less sickness of the stomach. The discharges at first, perhaps for a day or two, will be nearly natural in appearance, but two frequent, and usually accompanied with mucus and attended with pain. The operations will become more frequent and more painful with a large quantity of mucus streaked with blood. These will increase until it will be nearly all blood, and perhaps every half hour, the patient feeling a disposition to stool all the time: and will not get off the stool-box or mug, unless pressed to do so by the nurse, or from want of strength to sit up any longer. Some cases are attended with high fever, from the first, and others are free from fever during a week's or two weeks' attack. The skin is often bathed in a clammy sweat, which is very offensive, and hard to wash from the fingers after feeling the pulse. Again the skin will be hot and very dry, the tongue red and streaked, with sordes on the teeth, which indicate that the disease is typhoid. The tongue is usually coated with a whitish brown fur, with red edges. There is tenderness over the entire abdominal cavity, the anus is often prolapsed especially in children. In adults it often produces. Hœmorrhoides This should be particulary noticed, for the blood may come from them, which can be relieved by a simple operation, and is not dangerous if neglected. In the first stages the appetite is gone, rather loaths food. When the disease is of some ten day's duration and without pain ; patents have a voracious appetite, and will often kill themselves by eating, or by drinking wine, porter or ale. They usually have great thirst, but cold water will increase the cramps, and cause more frequent stools.

PATHOLOGY.

The bowels are in a state of imflammation in some part of their course. The stomach is not often inflamed in the first stages, but becomes so in a few days if the patient is not relieved; the duodenum is often inflamed, and the liver enlarged and congested. The spleen in the Mississippi and Brazos bottoms is most always hypertrophied.

The Ilium and jejunum are also often the seat of the disease, and are liable to sloughs and to be much contracted. When these parts are involved there is less pain than when the stomach and duodenum are affected, and the discharges are more mixed with foecal matter and mucus than when the colon alone is involved. The stools are apt to be watery and often gumous, and the case will more readily assume a typhous type. The glands of Brunner and Pyer, are ulcerated or congested and the mesentery is filled with dark blood. The colon is the principle seat of the disease, it being in most cases a colitis, an inflammation or congestion of the colon, most often of the sygmoid portion, next the ascending portion, then the rectum and lastly the transverse. When the blood is nearly pure it comes from the rectum, and the sygmoid section. The valvulæ coniventes are destroyed, the colon contracted to the size of your finger, looks black when the abdomen is opened. The mucus coat is destroyed in patches, and there are hæmorrhœgic points. The mesentery is congested and black with blood, sometimes there is a gurgling in the right iliac fossa and an enlargement of the coecum which can be distinctly seen and felt.

CAUSES.

In the districts where I have practiced the most frequent cause is malarial, and the attack comes on with a chill as in Intermittent Fever. The liver is primarilly involved, and the spleen enlarged; the stools at first being clayish and mucus. The liver tender and enlarged by congestion, urine high colored and scant. Getting wet is perhaps the next most common cause; the use of lime-stone water, especially in persons accustomed to use freestone; also a change from limestone to freestone. Lime-stone water always produces it on me even when only used in coffee. Vicisitudes of temperture, unusual changes of clothing, sleeping on the damp ground, or in damp rooms; getting the feet wet; drinking Whiskey, Porter and Ale, by those not accustomed to their use; eating shell fish or candies, especially in children; drinking ice water when very hot; taking cold baths; especially when their is no reaction; and lastly, but perhaps not least, the use, unnecessarly of drastic purgatives; especially quack pills. One of the worst cases I ever treated was from the use of Moffitt's Pills.

TREATMENT.

My first object in treating flux, is to ease my patient, relieve him of his pain, for which purpose, I use solid opium. I have found it better than any of the salts or tinctures. I give what I think will relieve pain, say from one to five grains every three hours, or oftener, if the pain continues. This done, I look to the cause, if there has been a chill and fever, I give with the Opium, Hydrargi Chl. Mitis three grains, and if the tongue is moist and covered with a brown fur, I add five grains of Quinæ Sulphatis (Quinine). So for a flux from Malairial causes, I give the following :

R. Hydr. Chl. Mitis, x ii grs.
Opii Pulveris, iv vel. xii grs.
Qui. Sulphatis, xx grs.
M. F. Chartulas, No. 4 vel Pillulas No. 12.

I give powder or three pills every three hours. I increase or diminish these proportions according to the time the chill comes on, and I increase or decrease the quantity of Opium, according to the pain. I move the bowels if they are not moved by the Calomel once each day, either with Caster Oil and a little Spr. Terpentine, or with Seidletz's Powders. After there is a good and thorough action, I give, if the liver is aroused and acting.

R. Bisthmi Subnitratis.
Opii Pulveris.
Quinæ Sulphatis, aa xxiv grs.
M. F. Pill. No. 24.

I give one every two or three hours to keep patient easy, and free from pain, I continue this plan from day to day, until I succeed in curing my patient, I never keep the bowels locked up, for I find if they are we will have typhoid symptoms, when we will have to discontinue Mercurials and substitute Turpentine. Thus :

R. Olei Terebinthinæ, ii drachm.
Mucilagi Arabicæ, iv oz.
Morphæ Sulphatis, iv grs.

I give a tablespoonful every three hours. I give this in all cases where the disease assumes a typhoid type, let it be primmarially produced from any of the causes I have given, believing as I do that Turpentine is *the* remidy for a typhoid condition. I also in this condition allow the free use of lemonade, made from citric acid, and not from lemons, as the essential oil in the pure lemon is irritative, and also the sugar of the Lemon Syrup is objectonable, owing to its becoming acid. I never in any case prescribe flax seed tea, slippery elm bark, mucilage or gum arabic water, they are insipid and usually disagreable to the patient, they prevent the obsorption of the medicines, and the water your patient drinks, and they, therefore, instead of doing good, are really injurious ; " I speak what I do know, and testify of what I have seen." I never use astringents (so called) for the very same reason. They always do harm rather than good. Even Claret wine often produces painful stools, I never allow my patients any kind of liquors, except pure Cogniac Brandy. Whiskey is absolutely injurious, and so are all the sweet wines. I have lost two patients with this disease in the City Hospital from using wine, stolen into the ward. Both were improving and asked to have wine to strengthen them and was denied. I give Cogniac Brandy freely when there is no fever, and the skin bathed in clammy perspiration. I have given a bottle in one night, and relieved my patient. It is well suited for cases of congestion. When these remedies fail to stop the discharges, I give per anum:

R. Tinc. Opii, ss drachms.
Aquæ Pluvialis, viii oz.

I give per anum at once, and repeat after each action.

If there be much sloughing and the disease in the rectum or colon. I give the following:

R. Argenti Nitratis, iv grs.
Aquæ Pluvialis, viii oz.
Morphæ Sulphatis, i gr.

I give per anum at once and repeat as above, after each operation. You must be careful not to increase the proportion of the Nitrate of Silver, for if the injection is too strong it will burn and irritate instead of soothe. If this preparation burns, you must lessen the quantity of Nitrate of Silver. In giving these injections never give them in starch water, or gruel—they prevent their local action and their absorption, and will cause their return. They are objectionable on the same ground that the mucilages are by the mouth. I always press on the hips and assist the patient in retaining them until all disposition to return is gone. I blister over the liver and spleen when they are much involved, especially when I have failed to arouse them with the mercury and quinine. When the liver, the urine, the saliva and the healthy perspiration are active, your patient will recover under good nourishing diet. The best I know is a soft boiled egg, prepared gelatin, toast water, which is good at all stages, and should be used where formerly the mucilages were. The bread should be well toasted and slightly burnt, and given warm or cold as the patient prefers it. It does not prevent absorption, it nourishes the patient and prevents the bad smell to a great extent. The stools should always be removed from the room immediately, as they will produce the disease on the nurse or others who may be in the room. They are an exciting cause, and hence it is often thought to be contagious when it spreads by filth. The floor ought to be wiped up once each day, and the room aired after each action.

This plan will cure ninty-nine out of every hundred taken in time, and persevered with to the end.

When I commenced to practice in Mississippi, they died all around me, but I did not loose a single case while I lived in the State—five years. I gave them Carpenter's Extract of Bark, instead of Quinine, I did not use Bisthmus but I eschued from first to last astringents, and mucilagnious drinks. All liquors except Brandy, and hence my great success. I often cured cases by a simple prescription of Laudanum Qui. and No. 6. Thus :

R. Tinc. Opii, ss drachms.
" Capsici Camp. ss drachms.
Qui. Sulphatis, v grs.

M. S. Give at once, and repeat in two or three hours if the pain returns.

This became a standing prescription with some of the planters. When any one would take the disease and quit work, they would give him this, and by morning he would be well except from the effects of the laudanum. The third day move the bowels with Castor Oil or Seidletz's, and if the pain and diarrhœa returns give half doses. I now use a great deal the following simple prescription when the secretions are active.

R. Quinæ Sulphatis.
Opii Pulveris.
Bisthmi Subnitratis, aa xii gr.
M. F. Pill. No. 12.

One every three hours. If typhoid symptoms come on I return to the Turpentine Mixture, and if the tongue is covered with the brown coat, I give :

Hydr. Chlo. Mitis.
Rhei. Pulveris.
Ext. Traxici, aa x grs.
M. F. Pills. No. 6.

I give three and repeat in three hours :

When the patient recovers his health partially, and still has occasional stools with blood, or they are too frequent. His secretions being active—I give :

R. Opii Pulveris, xii grs.

Argenti Nitratis, vi grs.
M. F. Pills. No. 12. One every four hours, or:
R. Argenti Nitrates, viii grs.
Morphæ Sulphatis, iv grs.
Aquæ Pluvialis, viii oz.

Tablespoonful three times a day. I cured in 1848 a Mr. Gee, of Panola Co., Miss., with this prescription, after he had taken medicine from nearly every physician in the country. I never use Rochelle Salts and Morphine, nor Sulphate of Magnesia and Morphine, unless there is high fever, and the patient has been bound up with astringents, and is in a typhoid condition, in this condition they often do good, and are better than oil, but no better, if so good as Seidletz's Powder.

Where the cause originates from the stomach, and is produced by dissipation, I give :

R. Acidi Nitrici, xxx guttas.

I give ten drops three times a day in a glass full of water, and drink through a quill or reed.

Again when the Digestive organs are involved, and the spleen enlarged, and where dyspepsia is the exciting cause, I give :

R. Tinc Opii, iv oz.
Aquæ Amoniæ, i oz.
Tinc. Capsici Comp. iv oz.
Tinc. Cinchonœ, iv oz.
Syrupi Sarsaparillæ, ii oz.

M. Give a wine glass full in a tumbler of water, three times a day, or it may be taken in good French Brandy. With this combination I cured a gentleman after suffering for years, and takened medicine from every physician he had confidence in. I cured a Mr. Bignham after he was given up by several physicians with the following :

R. Hydr. Chl. Mitis, xxx grs.
Opii Pulveris, xv grs.
Bisthmi Subnitratis, xxx grs.
M. F. Chartulas, No. 3.

One every four hours, until all are taken. He had scarcely any pain after the first dose. The next day I gave him Quinine, xv grs. in four doses and moved his bowels with a Seidletz's Powder. Repeated the same next night. He got well without a bad symptom. He had the disease to return and has been relieved several times with the same prescription. When I gave him the dose his attending physician was scared and begged me to divide the dose: I refused on the ground that less would not allay the pain and make him sleep. He rejoiced at the result.

I cured a little girl of Houston after taking medicines from several physicians with the following, (but this case was discharging water and mucus stools, when I saw it, the haemorrhage had ceased:

R. Qui. Sulphatis, i dr.
Ferri Lactatis, ss dr.
Morpæ Sulphatis, i gr.
Bisthmi Subnitratis, xx gr.

M. Give vi grs. of this mixture three times a day or oftener, if the bowels are not quiet.

When there is great tenesmus, and I wish to avoid giving opium by the stomach, I use suppositories of Opium, from i gr. to v gr., made into pills and inserted into the anus, after each evacuation. This often more effectually allays the straining disposition than if given by the mouth, and does not affect the digestion.

I have found this disease more stubborn here on this Island than any where I have practiced. Quinine is not so well bone, and the cases much oftener assume a Typhoid type. I attribute this to the poor diet that many I find in the hospital have been used to. The worst cases of this disease, and the most stubborn I have ever met with, were those following Rubeola (Measles) in the negro hospital, which I had charge of in 1863. I treated several hundred of these cases, and lost some eight. I made post-mortems on all, and I found the peritoneum highly inflamed and the colon contracted. I then used much more mercury and less quinine, and had better luck. I also blistered these cases as soon as I discovered the tenderness of the abdomen. I found brandy always made them worse, even though they were bathed in sweat.

To be brief, and sum up the whole, give—

1. Opiates, to relieve pain and keep your patient easy.
2. Mercurial, to subdue inflammation and start the secretions.
3. Quinine, to prevent mortification, congestion and relapses.
4. Derivatives, Blisters and Stimulants, to assist the mercurials and quinine.
5. Argentum Nitras and Bisthmus Subnitras, for their local effect, to subdue inflammation.

6. Evacuants, Oil, Spirits of Turpentine, Seidlitz, &c., to prevent absorption of the vitiated secretions and excretions, thereby preventing the typhoid state or condition.

7. Avoid astringents (proper); they prevent absorption and produce pain, and prevent the effusions of the effete substances, and as it were dam up the stream from the liver, and thereby produces the typhoid condition.

8. Nourish your patients with egg diet or prepared gelatin, for they are the most easily digested and assimulated of all kinds of food.

PROGNOSIS.

Favorable in most cases, when treated on the above plan, but very fatal treated with astringents, salts and laudanum, or Rochelle Salts and morphine.

I have not, in twenty years, lost twenty patients with this disease, that I had sole charge of, and managed to suit myself. I do not think any more of a patient's dying with this disease than I do with chills and fever. It is a tedious disease, and cannot be cured under ten days, when the bowels have once sloughed. Every time they are moved it irritates the abraded surface, and causes it to bleed, and destroys part of the granulations, hence the process of restoration must be slow.

In this paper I have alone spoken of Diarrhœa, and not Dysentery. I have treated of that condition of inflammation of the intestines in which you cannot keep any thing in them (Diarrhœa,) and not that condition of the intestines in which you cannot get any thing out of them (Dysentery.) In the first, we find purgatives (proper) useless and injurious; in the latter, purgatives are useful and will relieve, hence the good effects of salts and laudanum and Rochelle salts and morphine. They liquify the scybillæ, and pass them through the contracted intestines when they could not pass in an undissolved state. Physicians often confound the two diseases, which should not be done, as the treatment is different, and the pathological state justifies it. Both are attended with frequent stools: one, dysentery, nothing but jelly and mucus, and scarcely a spoonful at that; the other, diarrhœa, with mug-full after mug-full. Both have pain, which should immediately be relieved with opium; both often have fever; both brought on by the same causes. One effuses blood and serum, with mucus in the end; the other absorbs serum and hardens into scybillæ, the usual healthy discharges. You must subdue the effusion in one, but increase it in the other.

I have often seen a diaorhœa converted into a dysentery by the use alone of opiates and astringents. One case, I well remember, was swelled out to a dropsical dimension by sugar of lead and opium, and it took me two days, with injections of warm water and liquortive purgatives (Cream of Tartar, Epsom Salts, &c.,) to effect a complete action on the bowels. One of the two physicians in attendance thought he had spinal irritation, and indeed he was right, but the astringent (sugar of lead) had caused it. I will close this paper by this solemn injunction to all physicians: *Never make a prescription until you understand the pathological condition*. Better do nothing and give nature a chance.

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Retention of Placenta

AFTER MISCARRIAGE.

Mrs. ——, aged about forty-five, mother of seven or eight children, became pregnant, as she believed, in Nov., 1862, and in June, 1863, she had a miscarriage, or rather lost her child by decomposition, and, as she supposed, the placenta passed off with the haemorrhage and lochia, which was profuse for some time. After some months she had haemorrhage almost to prostration, which continued until about 15th of June, 1864, when she put herself under my treatment. A few days before I saw her, her attending physician told me of the circumstances of the case, and stated that she was now confined to her bed, and was not even able to sit up; that she was almost constantly flooding. He said he had not made a vaginal examination, and had been using Haemastatics—Tonics, Sugar of Lead, Opium and Ipecac, Tinc. of Iron and Ergot. I advised him to give large doses of ergot to cause contraction. He said this had been tried by several physicians, with no success, and that she was gradually getting worse. As to a vaginal examination, that she would not submit to. From this history I told him plainly, I would not do anything, until I knew what was the matter. I believed, and told him so, that there were hydatids—a mole or a polyp in the uterus, and I would certainly ascertain that fact before I proceeded any further, as she had taken almost every thing to stop the haemorrhargia. He left the city in a few days after this conversation, and the lady sent for me about the 14th of June, 1864. I found her flooding profusely—so much so that she could not sit up without feeling fainty. She gave me substantially the same history, the attending physician had done. I told her it was impossible for me to put her upon any rational treatment without a thorough exploration of the womb, both by taxis and the speculum; and stated my candid opinion that she was suffering from one or the other of the above named causes. She had never suffered much pain, and the haemorrhage was near natural blood, and readily formed clots. I proposed to make the necessary examinations, but she objected; that she was flooding so much that it would make her worse, and to give some paliatives and wait until to-morrow; which was agreed to. I then gave her the following:

R. Olei Ergotæ,
" Valerianæ, aa, ss. oz.
" Tinc. Opii Acetici, i dr.
" " Nucis Gallici, ss. dr.

S. Take thirty drops every half hour, until relieved. Also:

R. Zinci. Chloridi, xxiv grs.
Aquae, viii grs.

Inject per vaginam three times a day.

This was taken at about three o'clock in the evening, and I was again sent for about sun-down in a great hurry, the messenger stating that she was in great pain and very bad. I reached the house in a few minutes, and found that she had discharged a body about the size of a seven months placenta, weighing about one pound, and folded on itself, moulded it into an egg shape. I examined it carefully, and still have the specimen in alcohol; and I am perfectly satisfied that it is a placenta, being retained just 12 months after the fœtus passed off. It shows the umbilical attachment; has a serous coat internally, and the decidua over its external surface. It is open on one side, where the peritoneal surface comes out to its external edge, and has none of the characteristics of a mole, except its size. It does not indicate any adhesion to the decidua—appears perfectly natural, only mucus between the globular bodies that form the external surface of a placenta recently thrown off.

This is an unusual case; owing to the constant hœmorrhage. There was not sufficient power in the uterus to throw off this foreign body, though it was perfectly loose and no unusual attachments. If there had been, the placenta would not have been forced out so soon after the administration of the ergot.

It is well known that in cases of abortion the placenta is often retained for a short time, but that one at seven or nine months, is almost an unheard of thing, especially where there are no adhesions. This mass was perfectly free from putrifaction, and the uterus was perfectly patulous, and certainly admitted air into its cavity, or there could not have been so much hœmorrhage. This body must have been supported by arterial blood, and carried to its substance in the same manner as before death of the fœtus. The contraction of the womb had put it into its present shape. and caused the whole external surface to be put in contact with some portion of the internal mucus coat of the uterus.

FALSE CONCEPTION.

Lisfrank says he has observed several cases of retention of the placenta from abortion, and believes that moles generally are produced by a blighted ovum and retention of the placenta, and many others believe that no moles are formed except from this cause; but we have an instance of the formation of a mole in the uterus with an imperforated vagina. How can this be? There must be some cause except impregnation, for in this condition such a thing would be impossible. Placenta Retenta may be distinguished from true moles by its having a peritoneal covering, and not organized as polypi are. Hydatids may be the result of false conception, and no doubt generally is the result of a blighted ovum. In this case, we have the fullest evidence of the fœtus having passed off twelve months before the placenta, and no permanent injury to the woman, she being at present in perfect health. This case teaches us the great importance of examining, to see if the placenta has passed; in all cases whether natural labor, miscarriage or abortion. I believe the placenta remains as firmly attached to the uterus at 9 months in an abortion, as at 6 weeks. This case is interesting in a medico legal point. There might arise a case of infanticide, and a woman passing a placenta would be good proof that she was the mother, when if we take this case as a guide it would be no proof; for here is the expulsion of a placenta twelve months after the fœtus. So this proof of abortion does not hold good as to the time expected. Usually, if the placenta be retained only for a few days it decays and comes off decomposed. When it is adhered to the uterus, by inflammation, it is not generally perfect, and all that is not so attached decays and falls off. It shows, also, that when once thrown off it will never reunite by first intention or by compression, though its vitality is retained, at least sufficient to prevent decomposition. This placenta is nearly natural, (as it would come off immediately, after labor) only a little more free from blood, and more tenacious than a recent one.

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Fistula in Perineo.

CASE, OPERATION AND CURE.

In the November No., 1860, of the Nashville Medical Record, I reported the following case, which I insert before reporting the case here given, which is very similar, and it will be seen in this last case I have only carried out my former views on fistula in perineo.

HYPOSPADIAS: OR, URETHRA-PERINEAL FISTULA.

"Caleb, age about 38 or 39, property of Mr. T. J. Sweeney, came to our office to be treated for perineal fistula, caused by a fall on a gunnel of a flat-boat in the fall of 1854. There are this morning, July 8, 1858, three distinct fistulas to be seen; two immediately over the raphe of the scrotum, and one posterior to it. Urethra nearly closed and suffering from phymosis. We concluded to operate on him for phymosis first, and then gradually dilate the urethra. I commenced the operation, in the presence of several medical gentlemen, by inserting a probe-director, and in this a narrow-pointed pair of scissors, and divided the prepuce about half an inch, which gave immediate relief and exposed the glans penis. I then passed down the silver probe of our pocket case to the first stricture. He was then directed to bathe the penis with solution of morphine and sugar of lead—keep the glands exposed, and use the probe two or three times a day; this was continued until the 16th, when his prepuce was well, and he could use the probe without pain. I then passed a female catheter down to the stricture. He used this as he had done the probe—dilating the canal. He began to pass considerable water through the urethra by this time. When first operated on only a few drops passed. This was continued up to the 24th, when I cut down through the first fistula and through the hard callous part to the point of the catheter. I then pushed the catheter through the first stricture into the fistulous opening. I then passed a silk seton through the eye of the catheter and out at the opening, and thus tied the catheter in the place, the end passing through the stricture and extending up to the opposite side; this was kept in place for twenty-four hours, when the catheter was removed and the seton left in. The catheter was inserted every day, as far as it could be pushed beyond the stricture and fistula, into the other portions of the urethral canal. This was continued for another eight days. During this time there was but little swelling of the penis or testicles, and no fever, and the boy went about. On the 1st of August I passed the probe-director as far through the canal, towards the other opening, as possible, and cut down ~~on the~~ point as before; passed the catheter into this second fistula, and tied it there as before, leaving the first incision open and in a suppurating condition. In twenty-four hours the catheter was removed and the seton left as before. This time there was a good deal of swelling of the scrotum and some infiltration, which made it painful. The parts were bathed with nitrate of silver solution, morphine, and sugar of lead, alternately. The catheter was passed every day as before, but with some pain. Most of the urine passed out at the glands; sometimes in a good stream. The 20th of August, I continued the operation by passing a probe as before in the direction of the last fistula, but had to cut its way with a sharp-pointed bistouri through various cartilaginous septums, around which the urine had burrowed and formed various fistulous passages and cells. I succeeded in this way, reaching the last fistula formed behind the testicles and at the bulbous portion of the urethra. I then passed a male catheter through to this opening and out, externally, by turning the convex portion inwards and the point out. I then passed through this a large, round seton as before, and tied as before. This time he suffered a good deal of pain and soreness, but little haemorrhage. The catheter was passed up to the fistula every day along with the seton, but the seton was not removed, but held firm and smooth while the catheter was passed. The urine flowed through the urethra, and very little passed through either of the fistulas, they seeming to have closed over the seton in a valvular manner. He appeared to be doing well, and the swelling and soreness had subsided; but on the 1st of October he complained of having had a chill and high fever arose, and he was very sick; I gave him R. T. C. Pills, Calomel, Rhubarb and Taraxacum—equal parts; they operated well, but his fever continued, and I repeated it the next night, and gave quinine next day, still he did not improve, and on the morning of the 5th of August, I found him broken out with measles. I then stopped all the medicines, gave him an opiate to check his bowels, which had become too loose. The eruption went off about the usual time, and he began to have some appetite. I left home on the 14th of October, leaving him doing well, as I thought; only his bowels were too loose;

not much swelling about the scrotum, and the seton still in place and suppurating; makes water nearly entirely through the penis. Soon after I left he became bad from diarrhœa, having bloody discharges, which was weakening him. Dr. Porter, my partner, attended him carefully for several days, but, finding no improvement, he sent for Dr. Salmon, of Brazoria, and they attended him until his death, which took place on the 19th. Both believed he died from the sequelae of measles, and not from any effect of the operation. I regretted his death very much, for I had no doubt of final success. It was my intention to pass the catheter into the bladder at the next operation, and it seemed as there was no obstruction from the last fistula and the bladder; but the canal appeared enlarged, and would easily have admitted the catheter after I had prepared the last stricture so as to give it the proper direction. He had greatly improved in his situation, and could make water and not be troubled with its dribling away, as was the case before. We do not know how he caught the measles, unless he was inoculated with the bistouri which I used in the last operation. I had used it a great deal in puncturing blisters on patients who had pneumonia with measles the winter before, but it had not been used since February, and is it possible that such could have been the case? He was, before the last operation, up going about, and assisted in unloading schooners at the wharf, and might have caught it in that way. There were no cases in town then, nor for some time afterwards."

Timothy Foley, aged 34, native of Ireland, applied to me in February or March last for relief of a fistula, which I found to be situated posterior of the testicle, but having four orifices through which the urine continued to dribble. One was on the left side of the anus; two on the right side of the raphe, anterior to the anus, and between the anus and the testicles; one near the centre of the raphe just behind the testicles. The whole space between the testicles and the anus was hard and indurated, and there were urinous ulcers on the testicles and on the thighs, and a very offensive urinous odor about his body. He was much emaciated, and evidently was suffering greatly. I passed a probe down to the stricture, which was perfect in a straight line, and the probe could not be passed to the first opening. There was great hardness about this point, and I could not pass it to the right or left; the urine dripped from the penis when he urinated, but only by drops, about the same amount passing through the different fistulous openings. He told me he had fallen on a plank and hurt himself, and there arose an abscess behind the testicle; that it continued to harden and burrow until the present. The accident happened in 1862, and he had been in several hospitals, and to see several physicians, but had received no treatment of any importance.

I told him if he could get a place to board I would operate on him, and I believed I could cure him. He did not visit me any more until the close of the war, when he again came to me and said if I would write him a recommendation, he could get into the Island City Hospital; which I did, and he applied to the Provost Marshal for a permit, and thus fell under my care, as I had (in the meantime) been appointed Surgeon to this Institution. We received him on the 22d July, and I commenced to prepare him by poultices for a few days. On the 30th of July I put him in position as for Lithotomy, confining him in the same way; had him put under chloroform, and commenced the operation by putting into the urethra a common steel grooved director, pushed it down as far as I could. I then cut directly down on it from the first fistulous opening. I cut down until I could push the end out on the external surface. I then took it out and put it into the other passages, cutting them open to the external surface. In this condition I placed a male catheter in the urethra, letting it come out at the first fistulous opening. I kept him in this situation for about ten days. I then hooked up with a tenaculum the hard callous portions and cut them out, day after day, until I got down to the portion of the urethra that was in its natural position and size. He had gradually improved from the first operation, but several times there was considerable hæmorrhage, and once or twice he passed a great deal of blood from the rectum. I believe that the bladder was pressed down very low on the anus, and that as the callous fistulous portions were cut away, so as to allow the urine to pass off freely, it gradually returned to its natural position. When I had cut out a sufficient portion of the callous part to allow a catheter to pass, I put it into the bladder and drew off the urine twice each day. He soon got so he could put the catheter in himself. Every few days I cut out portions of callous tissue where the urine still burrowed around the catheter. I continued this course and he gradually improved until the parts had closed over the catheter, and there was no discharge through the old fistulous openings; but I still continued to use the catheter, though he could pass his urine freely and in a full stream for some time before I quit using it. Every two or three weeks there would arise an abcess and run for a few days, and then close up again, until about the 1st of December, which was the last time it run. The parts gradually became soft, and he was discharged entirely cured on the 20th of January, 1866, a useful and active citizen, instead of being a nuisance to himself and all around him.

*The Pocchionian Bodies not Found in a Lunatic.

KAISER—JOHN KAISER, THE LUNATIC—THE CRAZY MAN OF GALVESTON.

This unfortunate individual was admitted into the Island City Hospital, on the 19th of December last. He was registered on the Hospital Register as 46 years of age, a native of Germany, an Engeener by trade. Ever since I have been in Galveston, up to this time, I have known him as crazy Kaiser; going abont the streets talking to himself, carrying sticks, old clothes and his hat; usually followed by a class of boys, who were annoying him by throwing sticks at him and striking him. He was quite inoffencive, never hurting any one, though he was often hurt, and on the night of the 18th he was near the Catholic Church, when he was thrown down by some boys, on the mouth of a black bottle, which he was carrying. He suffered great pain all night, and was brought to the Hospital the next morning, complaining of severe pain in his abdomen. I gave him freely of morphine, and he slept nearly all day, and appeared better next morning, but was sick at his stomach. That evening he vomited up stercoracous matter, and appeared to be very cold. I gave him coffee which he drank freely, and also morphine. Next morning he died about sun up. His body was retained, and on the 24th of December, Prof. N. N. Allen and myself in the presence of the medical class and Coroner's Jury, made a *post mortem*. He was blue over the shoulders and was evidently badly brused on the right scapula. His mensentery was cemented to the intestines in many places, and his liver and stomach were covered with lymph. Just above the ilio-coecal valve in the ilium, there was a rupture through which foecal matter was pouring out. This rupture was large enough to admit the end of the index finger. We did not discover any old ulcer in this part, and believed it was produced by the mouth of the bottle, as it was about the size of a black bottle's mouth. His death was no doubt produced by this wound, as the peritoneal inflammation spread from this point. We took out the brains which weighed 3 lbs. 2 oz. There were no abnormal effusions, *but there were no Pocchionian bodies.* Where they were usually situated, was as smooth as the other surface. There were no depressions on the calcarium that would indicate that he ever had any. The Corda Spinalis was all white where it was divided as also the Corda Oblongata. No trase of cortical substance. The brain appeared to be more solid than usual, but the convolutions were perfect, and the gyrations as deep as usual. There were no adhesions between the Dura Mater and Pia Mater, or Arachnoid. No unusual amount of serum. After soaking the brains ten days with the membrens on, I dissected it before the medical class. I did not discover any softening or unusual induration and the cortical substance was well seen in the convolutins. The Arbor Vitæ was most beautiful, but the cortical substance could be scarcely seen in the Oblangata Spinalis.

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* Read before the Galveston Medical Society, Feb. 8th, 1866.

All the twelve pairs of nerves were well shown and natural. The Pituatary glands was crushed in taking out the brain by the chisel. The fluid was glairy and as I thought, natural. There was no enlargement of the sella turcia or abnormal protuberances in any part of the base of the cranium.

REMARKS.

This case is remarkable for the want of Pacchionian bodies, which are usually situated on the external surface of the Dura Mater to the right and left of the falk cerebri and are from eighteen to twenty in number. These bodies have been usually beleaved to be abnormal, but here is a lunatic with them deficient. I could not discover on the calcarium any depressions for their reception, which would indicate that they once existed; but I have examined other sculls and have not been able to see any depression on the calcarium when they were shown on the Dura Mater; hence this is not a proof that they never existed. Kaiser was well known to the Coroner before he became deranged, and he said he was a fine mathematician and engeener. He evidently was very fond of music, and kept good time with a stick while the bands were playing, and would invariably visit the rooms while they were playing. He evidently had ideas, but they were not co-ordinated but incoherant. Is it *possible* that the want of cortical or gray substance in the Corda Oblongata was the cause of this dificiency? It is my opinion, (if the society allow me to theorise) that the gray matter of the brain is produced by the destruetion of globules of blood in the extremities of the cortical portion. The blood circulating in those centres is destroyed by the excitement of the transmitted impressions and from this distruction we have deposited the coloring matter of the blood. This gray or cortical substance being found at the termination of all cortical or tubular portion, whether in the sympathetic plexus or in the carda spinalis, or the convolutions of the brain. The Arbor Vitæ in this subject was as perfect as any I ever saw, and he was going all day, and all night. He was never seen by me sitting down. His tongue was never still, constantly talking to some one or to himself, whether you met him night or day. I never saw him asleep until he came to the Hospital, and after I had given him a large dose of morphine. It is conceeded that the cerebellum controls muscular action and he certainly had this power to the fullest extent. His bones were very small for a man of his size. I would further state that this gray color of the brain is the same as the rete mucosum of the skin, and the Pigmentum Nigri of the eye. It is well known when this is wanting there is no sensation; as in amaurosis of the eye. I further beleave this is the same in character with the black deposit in yellow fever. It is my intention to investigate this subject with the largest Microscope that I can procure.

Our Prospects.

We have received enough cash to publish the first number, and hope to receive enough each month to pay the printers. We have received some notes, which when cashed, we will put on our list as cash subscribers. The January number we will be sent to the Postmasters of every Post Office in the State, and hope they will act as agents, and send to us a draft on some merchant or druggist in this city, New Orleans or Houston. We wish drafts sent according to the following:

$...... { THE STATE OF TEXAS,
County of.......................
December 1st, 1865.

Please pay to the order of GREENSVILLE DOWELL, M. D., Editor and Publisher of the *Galveston Medical Journal* the sum of................Dollars; Subscription for the year 1866, Volume 1st, from No. 1 to No. 12.

..............................M. D.

To Messrs......................
....

We do, this owing to the irregularity of the mails, and do not wish to run any risk. This draft, made payable to our order; cannot be collected without our signature, and therefore, is perfectly safe.

We have not received any contributions, but many letters of encouragement and promise. Though, I sent last summer for foreign Journals; up to the present, I have not received any. I insert an able paper on the cause of Intermittent Fever, from the *American Journal* of Medical Sciences: published by H. C. Lea, Philadelphia, at five dollars per annum. This is an old and valuable Journal, still Edited by Dr. Isaac Hays.. I have received an autographic letter from Dr. Bennet Dowler, which I here publish as he is proposing to commence his Journal again, and I heartily wish him success, and know he does and will deserve it. His subscription is five dollars in advance.

The Galveston Medical Society.

At the January Meeting, Dr. Edward Randall, was elected President Dr. Nagle refusing to be nominated, retired. The other officers remaine as last year, except Dr. Charles W. Trueheart, who was elected to fill Dr. E. Randall's place as one of the Censors. The Society adopted the Published Code with all the amendments.

At the February Meeting, the following gentlemen were elected Members:

Prof. N. N. ALLEN, Prof. JESSEE BORING,
" W. H. GANTT, " J. H. WEBB,
" J. L. WATKINS, " D. PORT SMYTHE,
Dr. GOODALL.

Dr. J. A. THOGRMORTON of Richmond, Texas, Honorary Member.

Prof. G. Dowell, read a report of the case of John Kaiser, the Lunatic.

Vice-President T. J. Heard, M. D., appointed Dr. Marcus Campbell of Galveston, to read a paper upon (at the March meeting) "the History, Type and Treatment of the Present Epidemic of Measles."

Prof. G. Dowell, a Report on "The Medical Topography of Galveston."

C. H. McGILL, S. P. T.,
Corresponding Secretary.

The Galveston Medical College.

This school has about twenty matriculants. They are from all parts of the State, and a fine class of young men. The Professors are much encouraged. The lectures have been delivered at the Island City Hospital, and they have free access to the wards. We have given in this number the report of the Hospital up to the 1st of January, 1866, which will show the number &c., treated. The present session will close the 1st of April. There are several candidates for graduation.

The City of Galveston.

We have a severe Epidemic of Rubeola. The measles are in nearly every house. We have one case of Small Pox in the Pest House, attached to the Island City Hospital. I have not heard of any cases in the city, and this case came from New Orleans. Our City is being greatly improved in appearance and cleanliness, preparatory for the coming summer. It is completely filled with strangers. The old citizens are strangers in their own homes. I am sorry to say the city has been much troubled with robbers and thieves, and several audacious murders have been committed. These things we hope will not last long.

GREENSVILLE DOWELL, M. D.

Dear Sir:

I hope you will pardon my delay in acknowledging the reception of the first number of your Journal, together with a friendly note expressive of good will towards the enterprise, I have announced in regard to the founding of a Medical Journal in New Orleans.

I beg you to accept my best wishes for the success, and long-life of your Journal, and yourself.

BENNET DOWLER.

New Orleans, Feb. 2nd, 1866.

CASH SUBSCRIPTIONS FOR JANUARY 1, 1866.

Dr. W. I. Cocke, Bellville, Paid	$5 00
“ P. J. Clarke, Hempstead, Austin Co.	5 00
“ F. Schlepergrel, Sibley. P. O.	5 00
“ Williams, Bastrop, Texas	5 00
“ J. A. Throgmorten, Richmond, Texas	5 00
“ R. W. White, Lagrange, Texas	5 00
Prof, John L. Watkins, Galveston, Texas	5 00
Dr. Henry L. Rugely, Caney, P. O	5 00
“ John Hoffman, Castroville, Texas	10 00
“ F. M. Hall, Port Sullivan, Texas	10 00
“ J. T. Norris, Brenham, Texas	5 00
“ T. J. Clark, Gentry, Harris Co., Texas	5 00
“ M. E. Oakes, Waco, Texas	5 00
“ J. V. Willingham, Meridian, Bosque Co., Texas	5 00

Report of Island City Hospital.

DISEASES TREATED FROM JUNE 1, TO JAN. 1, 1866.

CLASS OF DISEASES.	AD.	DIS.	DIED	REM.	REP.
Adenitis	1	1			
Abcessus	3	3			
Anasarca	3	1	1	1	
Bronchitis Acuta	1	1			
" Chronica	1	1			
Bubo Simplex	1	1			
" Syphiliticum	7	5		2	7
*Diabetes	2				2
Diarrhœa Acuta	3	2		1	
" Chronica	8	4	2	2	
" Haemorrhœgica	13	8	4	1	
Dysenteria Acuta	2	2			
Delirium Tremens	1	1			
Debilitas	7	6		1	
Epilepsia	1			1	
Epidydimitis	1	1			
Febis Congestiva	8	3	4	1	
" Continua Communis	5	5			
" In. Quotidiana	39	36		3	
" " Tertiana	18	16		2	
" Remittens	63	60		8	
" Typhoides	5	2	1	2	
" Exanthemartica (Dengue.)	7	7			
Fistula in Perineo	1			1	
" in Ano	2	1		1	1
Fractura	7	5		2	
Gonorrhœa	3	3			
Hydrothorax	1				1
Icterus—	1		1		
Luxatio	1			1	
Mania	7	2		3	2
Neuralgia	1	1			
Ophthalmia	2	1		1	2
Orchitis	4	3		1	
Onychia	1	1			
Phthisis Pulmonalis	10	8	2		
Pluritis	1				1
Pneumonitis	5	3	2		
" Typhoides	3	2	1		
Paronychia	5	5			
Parturitio	1	1			
Peritonitis	3		1		2
Panperitas	3	2			1
Rubeola	3	3			
Rheumatismus Acutus	5	5			
" Chronicu	4	3		1	
Synovitis	1	1			
Syphilis Primitiva	7	3		4	
" Consecutiva	14	9		5	
Scorbutus	2	1		1	
Scrofula	1			1	1
Tonsillitis	1	1			
Tetanus	1	1			
Ptyalismus	2	2			
Tolipes Varus	1			1	
Thrichiasis	1	1			1
Vulnus	4	3		1	
Variola	1	1			
Varix	4	2		2	
Vulnus Incisium	5	3	1	1	
" Contusurn vel Loaunatum	6	4	1	1	
" Sclopeticum	2	2			

*Faulkner died of Diar. Chrm. *McGilny, Dropsia.

NAMES OF PATIENTS WHO DIED,

WITH DISEASE, AGE, NATIVITY AND NUMBER OF DAYS IN HOSPITAL.

	NAME.	AGE.	DISEASE.	DIED.	No. D.	NATIVITY.	CONSEC. DISEASES.
1	Philip Koelsch	39	Anasarca	July 8	8	Germany	
2	Negro Man		Febris Congestiva	" 13	13		Speechless
3	Charles Smith	49	" Typhoibes	" 17	6	Kentuckey	
4	B. F. Faulkner	32	Diarrohœa Chronica	Sept. 18	2	Tennessee	Diabetes Mellitis
5	J. C. Johnson	56	Febris Congestiva	" 22	1	Tennessee	
6	Jeremiah Cochran	23	Diarrohœa Haemorrhagica	" 29	9	Ireland	
7	H. M. McCoy	34	" "	Oct 13	13	Pennsylvania	Febris Tyhoides
8	John McMeson	6	" "	" 21	9	New York	
9	W. C. McGill	60	Pheumonia Typhoides	" 28	5	Indiana	Diarrohœa Haemorrhagica
10	Thomas Heenan	25	Vulnus Incisums	Nov. 2	5	New York	Peritonitis
11	Mrs. Underton	60	Mania	" 7	123	England	Diarrohœa Haemorrhagica
12	W. H. Harvy	24	Phthisis Pulmonalis	" 7	37	"	
13	Alexander Harvy	34	Febris Congestiva	" 7	3	New Jersey	
14	Charles Carlin	25	" "	" 12	1	New Brumswick	
15	R. Stiff	58	Diarrohœa Chronica	" 20	3	Virginia	
16	T. H. Watts	26	Pneumonitis	Dec. 17	9	Georgia	Febris Remit
17	James Mosier	35	Peritonitis	" 17	1	Massachusets	
18	G. W. Malcher	60	Pneumonitis	" 17	10	Germany	Phuritis
19	William Perry	23	Phthisis Pulmonalis	" 25	58	Virginia	Abcess of Lungs
20	John Kaiser	46	Mania; Vul. Con	" 21	3	Germany	Peritonitis
21	John Bunzell	26	Icterus	" 25	2	"	Hœmorrhœgic

Recapitulation.

NUMBER RECEIVED, DISCHARGED, DIED AND REMAINING EACH MONTH.

MONTHS.	RECEIVED.	DISC'D.	DIED.	REMN'G.
June	11		1	10
July	33	19	2	22
August	78	65		35
September	36	45	3	23
October	53	38	3	35
November	43	39	7	32
December	46	26	5	47
Total	300	232	21	47

AGES.

NOT GV'N	1 to 10	10 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	OVER 70	WH'TE	BLKS	M.	F.
7	4	23	121	79	41	19	4	2	260	40	285	15

NATIVITY.

AMERICAN.	IRISH.	GERMANS	ENGLISH.	SCOTCH.	SPANISH.	FRENCH.	OTHER COUNTRIES	SEX.	
								MALES.	FEMALES.
151	52	37	15	5	5	6	29	285	15

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On the Cause of Intermittent and Remittent Fevers,

WITH INVESTIGATIONS WHICH TEND TO PROVE THAT THESE AFFECTIONS ARE CAUSED BY CERTAIN SPECIES OF PALMELLÆ.

By J. H. Salisbury, M. D., *Professor of Physology, Histology, and Pathology in Charity Hospital Medical College.*

All views upon the origin of malarious diseases, up to the present, have been purely hypothetical. No one has attempted a detailed series of investigations connected with the expectoration and other excretions of the human system; the bodies suspended in the night air of malarious levels and inhaled, and the tracing of such abnormal bodies to their true source; and finally the developing of ague paroxysms with these bodies. With these few remarks, we will proceed to a brief description of our researches regarding the origin and cause of intermittent fever.

During a lengthy series of careful experiments, connected with camp diseases, and those affecting vegetation, as the "curl in peach leaves," and the "blight in apple, pear, and quince trees," &c., and in studying the causes and consequences of fermentation, gangrene, decay, and the changes going on in diseased tissues, I was led by some of the experiments connected with bodies suspended in the atmosphere, to enquire into the causes of fevers, and especially those of an intermittent type.

Intermittent fever began to show itself in the rich malarial districts of the Ohio and Mississippi valleys, in 1862, during the month of May. It did not, however, prevail to any great extent till the months of July and August. The weather had been unusually damp up to about the first of July. During the months of July, August, and September there was scarcely any rain. Springs and streams became very low, swamps and humid grounds became dry, vegetation almost entirely ceased to grow, and the country presented all the signs of a severe drought. Soon after the dry weather commenced, intermittent fever, in malarial districts, became quite general. The disease rapidly increased during the months of July and August, till it had invaded nearly every family on ague levels.

The observations were commenced by examining microscopically the expectoration of those laboring under intermittent fever, and who resided upon ague levels and were exposed during the evening, night, and morning to the cool, heavy, damp exhalations and vapours rising from stagnant pools, swamps, and humid low grounds; in short, those who were constantly immersed in a malarial atmosphere, and where every one was more or less affected with symptoms of miasmatic poisoning.

The first salivary secretions and mucous expectoration of the morning, were those used. In these secretions occurred a great variety of zoosporoid cells, animalcular bodies, diatoms, dismidiæ, algoid cells and filaments, and fungoid spores. The only constant bodies, however, uniformly found in all cases, and usually in great abundance, were minute oblong cells, either single or aggregated, consisting of a distinct nucleus surrounded by a smooth cell-wall, with a highly clear, apparently empty space between the outside cell-wall and nucleus. Their peculiar appearance satisfied me early in the examination that they were not fungoid, but cells of an algoid type, resembling strongly those of the palmellæ. This part of the inquiry was extended to a great number of individual cases, on the low malarial levels, and to persons residing on elevated lands near and far removed from malarial influences. Whenever the mucous secretions were examined, from persons residing above the summit plane of ague, these bodies were invariably absent. They were found only below the summit ague line; whereas diatoms, dismidiæ, fungoid spores, and animalcular bodies, extended to some extent to all heights above the ague line; especially were they found in the vicinity of damp high grounds and streams.

After satisfying myself that these minute cells were the only forms found that could be relied upon as constantly present, on malarial levels and not present above them, my next step was, if possible, to trace their source and character.

In order to effect this, I commenced suspending retangular plates of glass, sixteen by twenty-two inches, about one foot above the surface of stagnant pools and marshy grounds that were partially submerged. The plates were placed horizontal, each resting on four pegs, a single peg supporting each corner of a plate. The plates were placed in position at dusk, and secured in the morning before sunrise. Invariably the under surface of plates would be covered thickly with large drops of water. This condensed vapor was subjected to careful microscopic examination. Many of the cells were found that occurred in the expectoration; but none of those minute oblong cells, so uniformly present in the morning expectoration, were met with. On the upper surface of the plates, however, these bodies were found in considerable numbers. I repeated these experiments for many nights, varying widely the localities, with the same results.

In passing to the stagnant pools and swampy grounds southeast of the city of Lancaster, Ohio, to suspend the glass plates, I had to pass over a rich, peaty prairie bog, where the water had become mostly dried off, and the surface broken by the tread of cattle. I had noticed that in walking over this ground, a peculiar dry feverish sensation was always produced in the throat and fauces, often extending to the pulmonary mucous surfaces, and that my expectoration was, after returning, uniformly filled with the minute oblong cells above described. This drew my attention to the partially desiccated peaty prairie bog, where the surface had been recently broken by the tread of cattle. I discovered on the recently exposed earth, what appeared to be a whitish mould, or more closely the incrustation of some salt. I here suspended the plates of glass, and the following morning, much to my delight, found the inferior surface of the plates covered with the minute cells, which I was in pursuit of. I immediately returned to the bog and secured samples of fresh earth, which were covered with the incrustation, and some which were not, and also portions of the boggy turf. On placing a fragment of the incrustation under the microscope, it was at once discovered to be made up of aggregated masses of the minute cells so uniformly met with in the expectoration of those exposed to the influence of the heavy cool vapors of malarial levels. It was further seen that these cells were algoid, and emanated from plants of a palmelloid type, as we had previously suspected; that there were several species, and that in the larger ones, grew several species mucidinous fungi.

The locality where these first results were obtained is situated on the southeast side of the city of Lancaster, between the canal and railroad, and just east of the depot and starch factory. Here stretches east to the southeast, along the canal, a low peaty, prairie bog, and in its vicinity the surrounding bottoms are low and humid. The portion of the town (3d ward) adjoining this bog, or all of it situated below a line about thirty-five to forty feet above the bog, has always been a fertile field for intermittents. Those living immediately on the edge of the bog are frequently subjects of ague, yearly, from May till November. August and September are usually the worst months.

To determine how high above the low grounds the bodies found on the under surface of the suspended glass plates were elevated, both at night and day, a small apparatus was used, which consisted of a glass screen standing perpendicular, and in front of it a large funnel, with the broad open end pointing from the screen, and the small end terminating within one-half inch of it. This was arranged on a pivot, and so constructed that the force of the currents of air kept the broad mouth of the funnel towards the wind. When an observation was to be made, the screen was covered with a concentrated solution of chloride of calcium, and the apparatus suspended at the desired height and left for one hour. The wind passing through the funnel, and falling upon the coating of calcium, deposits its small suspended particles upon the smeared screen. On examining under the microscope the liquid on the screen, after an hour's suspension, all the bodies floating in the atmosphere are found. By suspending this apparatus at different hights above the low ague levels, at all hours of the day and night, the following facts have been ascertained :—

1. That cryptogamic spores and other minute bodies are mainly elevated above the surface during the night. That they rise and are suspended in the cold, damp exhalations from the soil, after the sun has set, and that they fall again to the earth soon after the sun rises.

2. That in the latitude of Ohio, these bodies seldom rise above from thirty-five to sixty feet above the low levels. That in the northern and central portions of the State, they rise from thirty-five to forty-five feet, while in the southern, from forty to sixty feet.

3. That at Nashville and Memphis, they rise from sixty to one hundred feet and more above the surface.

4. That above the summit plane of the cool night exhalations, these bodies do not rise, and intermittents do not extend.

5. That the day air of malarial districts is quite free from these palmelloid spores, and from causes that produce intermittents.

With the view of tracing more carefully the symptoms of the local fever, produced in the mouth, fauces, throat, and lungs, by inhaling the cells and sporoid bodies emanating from the vegetable organisms forming the incrustations on the drying, rich, freshly exposed soil of malarial grounds, I visited, September 2d, 1862, the bog above referred to and spent some time in wandering over its surface, examining the incrustation, and in collecting samples for further microscopic study. In a very few minutes after my arrival on the bog, I began to feel a dry, feverish, constricted feeling in the mouth, fauces, and throat. This feeling increased till the fauces and throat became very unpleasantly parched and feverish. The opposite walls in swallowing adhered together, and the normal mucous secretions were quite entirely checked. There was a constant desire to swallow and hawk and spit, without being able to raise much, or to relieve in the least the dry, feverish, constricted sensation. This feeling soon extended to the bronchial and pulmonary surfaces, which became dry, feverish, and constricted, with a heavy congested sensation and dull pain. These peculiar symptoms lasted about two hours after leaving the bog before they entirely disappeared. The malarial matters inhaled appeared to be poisonous to the surfaces with which they came in contact; and there seemed to be an effort on the part of the exposed mucous surfaces to close up their absorbent and secretory organs, until this poisonous matter could be dislodged by the swallowing, and hawking, and spitting which they excited.

On the morning of the 3d of September I again visited the bog, to obtain more specimens for examination, and to study still further the symptoms produced by inhaling the malarious matters of ague bogs. I remained walking over the surface for about half an hour. The same train of symptoms manifested themselves that I experienced on the previous visit, being quite as severe and lasting quite as long.

On the evening of the 3d, just at dusk, I again visited the bog to suspend glass plates. I remained about fifteen minutes. I had scarcely left the ground when the dry, constricted, feverish feeling of fauces and throat commenced; and I experienced the same train of symptoms as on the previous occasion. Between this and the last of October I daily visited this and other similar bogs, always with the same result.

On Sept. 18th, Dr. Effinger, at my request, accompanied me over the bog, with the view of determining whether he would be affected with the same train of symptoms as myself. In a very few minutes after our arrival the symptoms began in his case, as in my own, and he described them precisely as they have been already stated.

On Sept. 20th Dr. Boerstler walked over the bog with me and experienced the same symptoms. Dr. B. remarked that he had often experienced the same, or similar sensations before, without knowing the cause.

Numerous other persons, who visited with me ague grounds, were invariably affected with the same train of symptoms.

The only constant foreign bodies found in the expectoration of those affected with the above local symptoms produced by walking over ague grounds, and in the expectoration of those immersed in the night emanations of malarial levels, were the minute palmelloid cells previously described. The source of these cells was found to be the palmelloid plants growing in such profusion on the drying soil of ague lands during the prevalence of intermittents. It is hence inferred that the minute cell emanations from those low vegetable organisms are capable of exciting local fever in the mucous surfaces with which they come in immediate contact; and further, that their is strong presumptive evidence from what has been previously determined, that by repeated and continued exposure to them they may cause general fever of either an intermittent or remittent type. This will appear more conclusive after perusing carefully the observations and experiments which follow.

On the northwest side of Lancaster, in the vicinity of the old canal mill, is another district of considerable extent, where the people are universally subject to ague. With the view of exploring for the local cause, I visited the locality Sept. 12th. Immediately west of this infected district is a wide low rich prairie. A few rods south of the mill and also west of it, I found the ague palmellæ growing luxuriantly, covering the surface of the soil recently thrown up by moles and exposed freshly by the tread of cattle. In fact, over the entire prairie, wherever the soil had been recently exposed the plants were developing in profusion. While collecting samples for microscopic examination, I became affected with all the peculiar symptoms of local fever previously described.

On the north edge of Lancaster, immediately on the west and south sides of Mount Pleasant, is another locality where ague prevails in its worst form; often running into fever of a remitting and continued type. There is a low belt of ground running through this locality, along which are stagnant pools of water. Around these pools and in the rich humid broken soil of the vicinity, I found the ague palmellæ growing in profusion. While collecting specimens for examination, I experienced all the symptoms of local fever as previously mentioned.

On the Columbus road, about one mile northwest of Lancaster, on the farm adjoining on the north the old Tallmadge place, occurred suddenly, about the middle of September, a severe case of ague in a strong healthy young man. This locality had been previously exempt from the disease. I visited the point with Dr. Effinger, who was attending this patient. About fifteen rods south of the house, we discovered a new ditch about ten rods long, running through a piece of low, black, humid ground. The freshly thrown out earth and the sides of the ditch were covered with ague palmellæ. While examining the soil along the ditch and collecting specimens for the microscope, the mouth, throat, and pulmonary surfaces became dry and congested as in previous instances.

This ditch was dug by the young man about two weeks previous to his attack.

On Sept. 21st, in company with Dr. Effinger, I visited Mr. C. and family who reside five miles northwest of Lancaster, in a locality previously exempt from ague. Mr. C. was attacked with a severe form of the tertian type of intermittent fever on Sept. 1st, and his wife on Sept. 3d. The paroxysms were arrested on the fourth day of the disease with quinia, by Dr. E., their attending physician. Relapse on the 15th; was arrested after the second paroxysm. Both Mr. C. and wife, on Sept. 21st, were much debilitated, pale and sallow. Mr.

C's house stands upon the edge of a low terrace, elevated about thirty feet above the prairie bottom, which approaches within fifteen rods of it, on the south and southwest sides. About fifty poles southwest of the house, a small creek, running through the prairie bottoms, empties into the canal. This creek, during rains, washes in sediment and makes a troublesome bar across the canal. The *lessees* of the canal had purchased, a short time previous, of Mr. C. an acre of ground at the mouth of this creek for the purpose of excavating there a reservoir to receive the sediments of the creek. About the middle of August, the workmen began the excavation. The soil excavated was a rich, peaty loam, with some black and blue clay. Very soon after the excavating was commenced, the workmen began to be taken down with ague, and very soon nearly every man was laboring under the disease. On Sept. 1st Mr. C. was attacked; on the 3d Mrs. C. was taken down with the same type. On Sept. 21st Dr. Effinger and myself visited the excavation, and found the excavated soil covered with "ague plants," a quantity of which were collected for examination. While gathering them, both Dr. E. and myself were affected with the symptoms of local fever as previously described. Mr. C., who accompanied us to the excavation, became so much affected in the throat, fauces, and lungs, that he had to retire from the place Mr. C. stated that he and his wife slept in a room in the southeast corner of the house, on the lower floor; while the children, seven in number, ranging in age from two to fourteen, slept on the second floor, immediately over theirs. He and his wife were attacked with ague on the 1st and 3d of September, while all his children were entirely exempt and perfectly well. He also stated that early every morning he noticed that the "fog" from the reservoir grounds extended to the house, and rose about two-thirds the way up the first story, and entered freely his sleeping apartment through the open window, and had the same odor as the soil containing the ague plants, and produced the same febrile symptoms in the throat and fauces. He never had noticed this fog to rise as high as the second story window where his children slept. The foggy vapour dissipated soon after sunrise and before his children were up. He stated that he had lived there over forty years, and had never had the ague before. That all his neighbors around, on the same and lower levels, were now suffering from the disease. I mention this case particularly, as it is of peculiar interest, showing in a stricking manner a quite fixed and marked line indicating the summit plane of invasion, above which the malarious causes do not extend.

In the eastern half of the city of Lancaster stands a hill, having an area of about one hundred acres. Upon its sides and summit the finest portion of the town is built. This hill rises to the height of about sixty feet above the adjacent low prairie bottoms, on its south and southeast sides. The heavy, cold, night vapours, emanating from these bogs, rise within fifteen feet of its summit. The upper surface of these vapors, in the morning before sunrise, is seen, from the surrounding hills, to be a broad, level plain, limited by its contact with the adjacent hills. The line described around this hill, by the upper surface of these vapors, is a horizontal one, and marks distinctly the ague line. All of those living on the hill above this line are exempt; all below are subject to the disease. The line is so well defined that, of people living on different floors of the same house, those on the upper floor are exempt, while those on the floor below are frequently all down with the disease. If any cases occur above the summit ague plane, they are found to be in such persons as frequent the lower levels during the evening or early morning.

During the summer of 1862, and especially during the months of August and September, intermittent fever prevailed to a remarkable extent in the town of Carroll, situated on the canal, between Lancaster and Columbus. The site of the town and much of the surrounding country is low, and many boggy places occur along the canal. During the months of August and September, the old and young of almost every family, including physicians, were down with ague. I visited this locality several times during these months, and found the ague palmellæ growing abundantly on the partially desiccated, boggy soil, along the canal, through the town and vicinity, and found the morning expectoration of all more or less filled with the minute cells of these plants.

Numerous other localities were visited where intermittent fever prevailed, and in every instance, without a solitary exception, the ague plants were found growing in the immediate vicinity of the disease, and in no instance were they found when the disease did not occur.

An interesting instance of the readiness with which the emanations from these ague palmellæ produce the disease, presented itself, the last of September, one mile west of the city of Lancaster. At this point, a few poles south of the pike, and about fifty poles west of Judge Van Tromp's residence, is a small pond, that affords water to a small flouring mill. During the months of August and September, the water became low in this pond, and the ague palmellæ made their appearance in abundance on the drying, peaty mud, from which the water had retired. From the time these plants appeared, till the last of September, the wind was in the south. There being no buildings on the north side of the pond, there was no appearance of the disease. Near the last of the month the weather became cool, the wind changed and blew briskly from the north and northwest. About thirty poles a little southeast of the pond, twenty-five to thirty feet above it, on the hillside, a strong, healthy, laboring family resided, who had been, up to this time, entirely free from ague. The wind blew over the pond directly towards this house. About the fourth day, several members of the family were taken down with the disease. The wind now suddenly changed to the southeast, blowing across the pond, directly towards the tollgate, about forty poles distant, where a family resided in which were four small children. This family had been, up to this time, also exempt from the disease. The third or fourth day, two cases of intermittent fever occured among the children, and soon after the father was attacked.

Here is an interesting instance of the transmission of the malarial influence by the winds. These families had lived for nearly two months in the vicinity of an abundant crop of ague palmellæ, without taking the disease. The pond being small, banks abrupt, and soil around dry, no fogs or night vapors, to any extent, emanated from the place to diffuse the poison. What malarial matters there were emanating from this point, were borne north by the prevailing wind. As soon, however, as the wind changed, and blew over the pond towards the neighboring abodes, the disease, in a few days, appeared.

A very interesting instance of the sudden occurrence of intermittent fever, at a point where it was never known before, occurred at the residence of Hon. John T. Brasee, one and a half miles west of the city of Lancaster, upon an elevated ground, about one hundred feet above the ague levels, and far removed from them. The locality has always been, from the first settlement of the country (sixty-five years), exempt from intermittent fever. The farm is abundantly supplied with fine large springs of pure freestone water, cold and soft. Near Mr. B.'s residence, one of these springs occurs. It had formely supplied a small fishpond, containing about ten square rods of surface. This pond, several years ago, had been drained, and the rich alluvial bed had become covered thickly with grass. About five square rods of it were spaded up, for the first time, in the month of July, 1863, for celery and vines. Ague paemellæ began to appear on the freshly-spaded soil about August 1st. A portion of these were white, like those usually met with, while others were of a brick-red color, giving to the surface the appearance of having been sprinkled over with a thin layer of bricks. Aug. 8th, Mr, Brasee and wife, who slept on the lower floor, began to feel languid, with loss of appetite, and pains in limbs and back. 20th, Mr. B. had his first chill, which came on about 12 o'clock (noon). The paroxysm lasted about three hours, and was also very severe. 23d, the farm-hand and his wife were attacked. Mr. B.'s residence stands about ten rods north of this patch of ague ground, and his tenant's house about fifteen rods south of it.

August 22d, I examined the patch minutely. It was perfectly covered with ague palmellæ. Those growing on the dry prominences of the soil were white; those on the retired, smooth, and more damp portions, were the color of brickdust. The whole surface had the appearance of having been sprinkled over with brickdust and lime. No cases of ague occurred in that portion of the family who slept up in the second story, nor were there any premonitory symptoms of that disease.

August 24th, the small ague patch was covered, at my suggestion, with a layer of straw, to the depth of six inches. On suspending glass plates over this for several nights, I obtained no traces of the palmelloid spores or plants, while before the straw was spread over the plants, the glass plates were covered nightly with them.

The four cases of ague readily yielded to treatment, with no subsequent manifestations of the disease. The straw, in this instance, prevented the further developement of the ague palmellæ, and prevented the spores of the already mature vegetation from rising in the damp night vapors.

Another interesting instance came under my observation in the city of Columbus, Ohio. On a visit to this place, during the last of September, 1863, I met Mr. Theodore Tallmadge, who stated to me that his children were all being attacked with ague. He stated that his family had been spending a few weeks at White Sulphur Springs, and that about two weeks before, they had all returned home hearty and well. In a few days after their return, one of his children was attacked with ague, and soon after, another. This surprised him, as ague had not previously been known to occur at his residence. Feeling satisfihd that there must be some local cause, I, on the following morning, repaired to his house and examined his grounds, I immedidiscovered a prolific crop of ague palmellæ directly in the rear of his kitchen, in some new, peaty soil he had drawn there, a few weeks previously, to level off the surface. I directed him to sprinkle the surface of the new soil thickly over with caustic lime, after which he had no more cases of the disease in his family.

On the rich limestone lands of the Maumee and Miami Bottoms, in Ohio, the black, alluvial lands of the Wabash and its tributaries in Illinois and Indiana, the fertile prairie lands of these States, and Missouri and Iowa, and on the rich, low, limestone, and alluvial lands of Kentucky, Tennessee, and Mississippi, ague palmellæ develop in great profusion, especially during the months of July, August, and September. For the most part, wherever the soil is free from lime, and the water soft, the ague palmellæ developed are mostly white, or slightly tinged with yellow and green, and intermittents are comparatively free from congestive tendencies, and the types better marked, the eliminating organs much less liable to become badly deranged, and the paroxysms more readily yield to the tonic influence of quinia and iron, and the disease is quite promptly and easily controled, unless the system be exposed to the continued and constant action of the cause of the affection. In limestone regions, however, where the water is hard and the soil highly calcareous, there is a remarkable tendency, during the months of July, August, and September, for the malarious portions of the soil to become covered with palmellæ, mostly of a different color from those found on soil not calcareous. On calcareous soil the palmellæ are usually pink, brick-red, greenish, or yellowish. The brick-red and greenish plants are the most abundant. In such localities, intermittents are apt to assume a congestive type, the functions of the eliminating organs (epidermic and mucous surfaces, and portal and renal glands) become much deranged and partially suppressed, oxaluric, and often phosphoric states follow, and, in this condition of the system, quinia, iron, and arsenic, alone or combined, do but little good, and often in old and bad cases, tend to aggravate the disease. If, however, in these severe forms, the functions of the eliminating organs be restored to their normal or to increased activity, by the proper diuretics, diaphoretics, expectorants, and alteratives, the paroxysms readily yielded to the tonic and anti-zymotic influence of quinia and iron.

College Hill, Nashville, Tennessee, rises from 75 to 100 feet above the level of the Cumberland, which flows around its northern and eastern base. Upon its summit is an area of from six to ten acres. Here stands the University of Tennessee, and the residences of several of the faculty. When the Federal forces drove the Confederates from Nashville all of the high points or eminences, in and around the city, were fortified, for the better defence of the place. This hill was strengthened by a ditch six feet wide and four feet deep, with the excavated earth thrown on the outside, and running around on the eastern and southern brows which face the adjacent country. Soon after the University buildings were appropriated for hospital purposes. This high point was supposed to be peculiarly healthy from its elevated airy position, overlooking most of the city and surrounding country. As soon, however, as the warm weather of May and June set in, it was found that this high ground was quite malarious, giving rise to a peculiar type of congestive intermittent that was very severe, producing in some instances death. The attendants were more subject to the disease than the inmates of the wards. This, probably, arose from the fact that the former often exposed themselves to the evening vapors and exhalations outside, while the latter were mostly confined to the wards.

This peculiar type of intermittent became much more severe during the months of July, August, and September. The surgeon in charge, Dr. Lynde, was under the impression that this malarial influence came from the low ground to the east of the hill which bordered on the river, and which was half a mile distant and 100 feet below. This, on careful inquiry, was found to be highly improbable, as the influence was much less marked on this low ground than on College Hill. On carefully examining the soil on the perpendicular sides of the ditch, which was dug to strengthen the place, it was found covered completed with cryptogamic vegetation, forming, in places, a greenish, and in others a brick-red film on the surface. Samples of this soil were preserved in boxes for microscopic examination. On my arrival at Cincinnati, three days after, this vegetation was carefully examined under the microscope, and found to be composed of green confervoid filaments and palmellæ, having mostly a pale green and a brick-red color. The vegetation was very prolific and abundant. The palmellæ were of different species from those met with on non-calcareous soils, and were similar to those in districts where intermittents are of a congestive type.

Occasionally the soil on the hill, where it had not been disturbed, was covered slightly with the same vegetation. This was noticed all through the city and surrounding country wherever there were any indications of a malarious tendency. It was not, however, noticed in any great abundance, except where the fresh soil had been thrown up to a depth below where it had been usually disturbed in cultivation.

The city of Nashville stands on a series of small conical limestone eminences, which rise from 50 to 100 feet above the river. The limestone comes to the surface, or nearly so. This is so much the case that the rock is perfectly bare, and denuded of soil, over at least one-forth of the surface, while the balance has a covering ranging from two inches to four feet in thickness. Wherever a cellar is dug it is sunk into the solid rock. The same may be said of all sub-drains and sewers. The limestone is usually either porous, shaly, or massive, and is rich in fossil remains.

The soil on College Hill is rather deeper than on most of the surrounding eminences and the summit has a larger and more level erea. The digging of this defensive ditch changed the health of the locality, so that now, instead of being the healthiest locality in and around Nashville, it has become decidedly the most malarious and sickly.

On the limestone soil surrounding *Lousville, Ky.*, and in *Jeffersonville*, opposite, similar species of palmellæ are developed upon the soil to those found at Nashville. All the low limestone lands in this region appear to be more or less malarious. Those just above Jeffersonville, where is erected the U. S. G. Hospital, on the Chestnut Hill plan, are very malarious. This site is on a low terrace, about 70 rods back from the river, and rising about 20 feet above the river bottom. Immediately upon the brow of this terrace is located the hospital. The grounds had several sink holes, filled with stagnant water, which now have been filled up. Around the base of the terrace, springs, for nearly a mile in length, make out, forming a boggy, swamp strip of ground, from 10 to 20 rods wide. The south wind blows over this directly up to the hospital. It is made up of a black sandy muck, underlaid with stiff clay. This soil produces, during the months of July, August, and September, abundant crops of ague palmellæ. On this account the hospital is unfortunately located.

The low grounds around *Cincinnati and Covington*, during the months of July, August, and September, produce the ague palmellæ to some extent, and are malarious. Intermiitent fever, often sevre, is here met with.

Camp Dennison.—At this point is located the *Dennison* U. S. G. Hospital. It is about 16 miles from Cincinnati, on the Little Miami Bottoms, and about 25 feet above the river bed. The soil is calcareous, being underlaid with limestone. The hospital inclosure contains 180 acres of bottom land. Through it passes a shallow ravine, a drainage line from the adjacent hills to the river. The northern fifth of the grounds, previous to draining them in the spring of 1863, with open ditches, was damp, the surface water standing till evaporated, the natural surface drainage being very poor. The wards standing on this soil were found to be unhealthy, the inmates being very subject to intermittent fever. Since it was drained the wards have been empty.

The soil over this portion of the grounds, wherever it is exposed by eve drains, ditches, &c., becomes, during the months of July, August, September, and October, covered with a green, cryptogamic vegetation, which, in places, becomes of an ink-black color. This vegetation is composed mostly of confervoid filaments, which are frequently terminated when matured by sporangia. These sporangia are noticed when the vegetation has assumed an ink-black color, with a metalic lustre. Mixed with these filaments are numerous palmelloid plants of two species, one green and the other brick-red. When mature these plants, as they become dry, send off multitudes of minute spores, which are elevated in the night exhalations.

There are also met with on calcareous soils another species, of a metalic lead color by reflecting light. By transmitted light they have a dirty, brownish-green color.[1]

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[1] It may be here remarked that *Palmellæ* belonging to the lowest known vegetable organisms. The several forms of this type which are constantly attended on intermitent malarial disease have received the generic name *Gemiasma* (earth miasm).

Gemiasma (Salsbury). Plants having the appearance of cells, each consisting of a thin outside wall, inclosing an inside cell filled with minute spores, either single or aggregated, multiply by duplicative, segmentative within a parent membrane, and also developed from spores. Colors various, as red, green, yellow, white, plumbeous, &c

There are several species which seem to act as malarial poisons. The brick-red, green, and plumbeous plants are principally found upon rich calcareous soils; while the greenish-yellow and white varieties are found mostly upon non-calcareous ground.

G. rubrum (Salisbury). Color, brick-red. Gives the soil the appearance of having been sprinkled over with brickdust. Produces intermittents of a congestive type.

G. verdans (Salisbury). Color, green.

G. paludis (Salisbury). Color, greenish-yellw. Found mostly on non-calcareous soils.

G. plumbous (Salisbury). Color, plumbous by reflected, and a dirty brownish-green by transmitted light.

G. alba (Salisbury). Color, greenish or yellowish-white.

In all these species the mass of the visible dust, or incrustation upon the soil, is usually made up of incalculable multitudes of minute spores that have escaped from the plants beneath them. These most minute of all known organic cells are the organisms that are elevated in the night earth exhalations.

Another type consists of jelly-like protuberances, single or in groups, made up of a thin external membrane inclosing a highly transparent, gelatinous material filled with minute double walled spores. This type has received the generic name *Protuberans.*

Protuberans (Salisbury). (Ag. gave this name to a species.)

In these the double walled spores are developed in a highly transparent jelly-like frond, surrounded by a delacate membrane. These are various shades of green, yellow, brown, and, perhaps, other colors.

Another type of plants seem to multiply by the extending laterally of a thin lamina or gelatinous layer, which, like the protuberant variety, consists of an outside parent membrane, within which is a gelatinous matter, filled with a multitude of minute double walled spores, which escape in vast numbers as the lamina dries. This type has received the generic name *Lamella* (Salisbury).

All these genera have spores of a similar structure. The spores are mostly oval, or more or less oblong, and have double walls. The spores of the Protuberans are larger than those of the other genera, and the space between the nucleus and outside cell-wall is more marked.

So far as I have examined (and my observations have been widely extended), I never have found a case of ague, *in situ*, where I did not find these plants growing near; *vice versa*, I never have found these plants growing in any locality but that (if such locality was inhabited) intermittent or remittent fever, or both, prevailed in proportion to their extent and profusion.

As early as the dry warm weather of spring and summer evaporates the surface water, and begins to dry off the recently exposed soil of rich humid low grounds and peaty bogs in certain localities; a peculiar white, green, or yellowish, or greenish-white, or brickdust powder will be noticed making its appearance upon the surface. This is thicker in such places as have been recently broken, exposing fresh earth. It also varies considerably in appearance, according to age, rapidity of surface drying, and peculiarity of soil. It is not confined to desiccating peaty bogs and humid low grounds, but is common to the drying beds of streams, pools, ponds, and ditches, and also to calcareons soils, and even sandy plains in humid localities.

On the drying of the newly exposed soil of rich prairie lands and humid low grounds, this vegetation appears white and much thinner than on desiccating peaty bogs. This difference arises from the developement on the latter of some larger species than grow upon the former, while the small species of the former are common to the latter. These plants occupy the projecting points and prominences of the soil, and resemble to the unaided eye, an incrustation of saline matter. During the drying of the soil these plants develope rapidly, and as rapidly disintegrate and set at liberty their spores, which become elevated and suspended in the damp, heavy night exhalations. These exhalations, suspending their palmelloid cells and spores, rise, usually, so that their upper surface in the Northern and Western States, is marked by a plane varying form thirty-five to sixty feet above the surface of the ague grounds. The upper surface of these exhalations describes a horizontal plane, stretching away from the place of origin, in the direction traced by the wind. The spores and cells of these palmellæ are found diffused throughout these vapours, but do not extend above them. They occur, however, more abundantly at and near their upper surface, than lower down. This will explain the singular fact often noticed, that at a certain distance above the ague

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In the Palmellæ there are two modes of propagation, one by division and the other by spores, and both of these are often common in the same species. These plants are very prolific, springing into existance in a few days in vast multitudes, during the hot summer months, on the drying beds of ponds, stagnant pools and ditches, on the broken soil of humid low grounds, and new prairie lands in malarious districts.

The species are many, all of which have heretofore been regarded as innocuous. There is strong evidence for believing, however, that the minute species that are developed in such abundance in the above-named localities, and the spores of which become elevated and suspended in such multitudes, in the heavy humid night exhalations of ague districts, are decidedly poisonous to the epithelial surfaces with which they come in contact, and are the true soure of intermittent and remittent fevers.

bottom, along the side hill, malarious diseeases are frequently worse than on the bottoms themselves. The zone occupied by these exhalations has a temperature and hygrometric condition of its own; differing materially from the stratum of atmosphere resting immediately upon it, which is much warmer and dryer.

Plants in the Urine of Ague, which act as an Exciting Cruse.—The urine of several hundred cases of intermittent fever has been subjected to careful microscopic examination, with the view of arriving at general results, as to the abnormal bodies present. The urine was in some cases voided before treatment had commenced; in others, after treatment had been continued for some days, without breaking the paroxysms; and in others the paroxysms had been broken for the time with quinia, while the fever poison still remained in the system. The urine was voided, either in the algid, febrile, or sweating stage of the disease; between the paroxysms, or after the paroxysms had ceased for some days. The results of these examinations are highly interesting. They establish the fact that ague plants, the same as grown upon the ague soil, are constantly developing in the system of the intermittent fever patient; and that the urinary organs constitute one important outlet for the elimination of this fever vegetation. That the urinary organs, with the perspiratory apparatus, are the important channels through which nature strives to rid the organism of the exciting cause, and through which the physician should operate by all the medicinal means at his disposal, to eradicate the disease. They explain to us the important reason, why it is that quinia breaks the continued recurrence of the paroxysms, while it does not eradicate the poison; and why diuretics and diaphoretics and expectorants are such all important aids in eliminating from the system the malarial cryptogams. While quinia braces up the system by its powerful tonic action upon the organizing processes of the epithelial tissue, and through this imparts such tonicity to the nervous system as to enable it to resist the paroxysms, it is well known not to exterminate the exciting cause; although it may control for a time their future development, in the same way that it checks the multiplication of yeast plants in fermentation.

This exciting cause must be carried out of the organism through those excretory channels which nature has provided for the elimination of effete and abnormal products. The principal of these are the perspiratory apparatus, the mucous surfaces and urinary organs. That the perspiratory apparatus performs in this disease an important office, in this eliminating process, we should long ago have understood, from the fact that through this excretory system nature so powerfully acts in her efforts to eliminate the abnormal and poisonous products of the disease. The sweating stage of the paroxysm of ague is essentially a curative one.

These examinations have also established the fact, that in intermittent fever conditions, torula cells are present, indicating the presence of glycogenic matter in the urine. Cholesterine is also uniformly present in this excretion in ague. Both glycogenic matter and cholesterine are found in the liver and spleen. The spleen is the great manufactory of the cholesterine,[1] and at the same time organizes some glycogenic matter, as is evident from the developement of torula cells in the spleen, when it is removed from the body and allowed to ferment.[2] The liver is the great apparatus for organizing glycogenic matter. The kidneys never normally organize or excrete these bodies. In intermittent fever, we see then, that the functions of the liver and spleen, of secreting glycogenic matter and cholesterine, are in part taken on by the kidneys; indicating, perhaps, something like a metastasis of function; and pointing us to these organs for disturbances that are excited by the cryptogamic poison of ague.

There is also found quite uniformly in the urine the spores of a species of fungus—generally vegetating—belonging to the genus *Sphœrotheca;* and which is uniformly found growing on and in the larger species of palmellæ, belonging to the genus *Protuberans*, and also in the apple, pear, and quince, producing decay in these fruits. I do not know that this plant produces any abnormal influence upon the system, as it is often met with in the urine of healthy persons.

The argue plants occur in the urine in the form of little cottony flocks, so small that they are scarcely noticible by the unaided eye, and too few in number to communicate turbidity to the excretion.—They vary greatly in amount present in different cases. They are uniformly more abundant when the disease is severe and has continued for some time. They are very light in color, highly transparent, and appear to be developed in the bladder, pelves of kidneys and ureters, often in considerable numbers. In some cases of ague of long standing, yeast plants, species of *Pennicillium* and *Aspergillus* are also found, developing in large numbers, the mycelia often rising to the surface, a short time after the urine is voided, producing fertile threads and fruit. These plants were found largely developing in the urine of several patients, in the month of September, who had been laboring under the disease most of the summer. In several instances of this kind, I have known the intermittent to merge, after some weeks, into continued fever of a typhoid type. In all cases of this kind, the patients had been receiving constant accessions to the disease, by being exposed daily to the exciting cause.

Plants in the Urine of Intermittent Fever, Consequent on Peculiar Pathological States.—In the urine of all cases of intermittent fever, the spores of Pennicillia are present, indicating the presence of glycogenic matter undergoing fermentative changes. These cells are generally more abundant in obstinate types, and in cases of long standing, than in the milder forms and recent cases.

In several instances, in observations, where the patients had been laboring under severe and obstinate forms of the disease (such as were exposed to constant accessions) for many weeks, tending to

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[1] See my papers on the Minute Structure and Functions of the Liver and Spleen.
[2] Ibid.

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On the Cause of Intermittent and Remittent Fevers,

WITH INVESTIGATIONS WHICH TEND TO PROVE THAT THESE AFFECTIONS ARE CAUSED BY CERTAIN SPECIES OF PALMELLÆ.

By J. H. Salisbury, M. D., *Professor of Physology, Histology, and Pathology in Charity Hospital Medical College.*

typhoid states of the system, the urine was found containing numerous vegetating fungoid filaments, which were the developing Mycelia of Pennicillia, Aspergilli, or Sphærotheci. In these obstinate cases of the disease, the urine passes rapidly to the acetous fermentation even before it is voided, ushering in filamentous developement in the cryptogams present. This fermentation progresses so rapidly, that in a few hours after the urine is voided, putrefactive fermentation begins, and small white cottony flocks or tufts of fertile threads appear above the surface. These soon bear spores, when the plants are discovered to belong either to the genus Pennicillium, Aspergillus, or Sphærotheca. There is a beautiful species of Pennicillium often present, having symmetrical heads, the stem dividing first into four equal pedicels, which ascend close to each other, and soon subdivide each into four pedicelets, each one of which bears a long moniliform line of spherical spores. I do not know that these cryptogams are at all injurious of themselves in the urine; but they indicate the presence of glycogenic matter and rapid fermentative changes, which are abnormal. They are probably merely the consequences and not the cause of the existing pathological states.

Experiments Relative to the Production of Intermittent Fever.—With the view of obtaining still more positive evidence of the intimate relation between the cause of intermittent fever and the cryptogam developing upon drying humid soils, &c., I filled six tin boxes with the surface earth from a decidedly malarious drying prairie bog, which was covered completely with the palmellæ previously described. Cakes of the surface soil were cut out, the size and depth of the boxes, and fitted carefully in, without disturbing more than possible the surface vegetation. The covers were then placed on, and the boxes transported to a high, hilly district, some five miles distant from any malarious locality, and where a case of ague had never been known to occur. The locality was over three hundred feet above the stream levels; was dry, sandy, and rocky. I here placed the boxes of cryptogams on the sill of an open second-story window, opening into the sleeping apartment of two young men; removed the covers and gave particular directions that the boxes should not be disturbed, and the window left open. On suspending a plate of glass over the boxes on the fourth day, during the night, the under surface of the plate, the following morning, was found covered with palmelloid spores, and numerous cells of the same kind adhered to a suspended plate in the room, which was moistened with a concentrated solution of chloride of calcium.

On the twelfth day one of the young men had a well-marked paroxysm of ague, and on the fourteenth the other was taken down with the disease. They both began to feel unnatural and dull about the sixth day. All three stages of the poroxysms were well marked. The type in both cases was tertian, and was readily controlled by the appropriate remedies.

Four members of the family slept on the lower floor of the house, but none of them were affected.

The experiment was repeated at another point, in the same neighbourhood, where one young man and two boys were exposed in the same way as described in the previous case. In this instance, the two boys were taken down with the disease; one on the tenth and the other on the thirteenth day of the exposure; while the young man escaped.

On account of other duties, and the difficulty of obtaining the consent of parties for experiments, I have been unable to conduct this part of the examination further. The experiments thus far, however, are most highly interesting and confirmatory of the previous observations and results of this extended inquiry, on which nearly three years of almost constant labour have been bestowed.*

Pathology of Intermittent Fever.—The lesions in intermittent fever are confined mostly to epithelial structures, showing quite conclusively that the exciting cause acts primarily upon the parent epithelial cells; or, those cells that either organize the products that nourish the several tissues, or disorganize those of interstitial decay, so as to prepare them for ready elimination.

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* Another interesting instance of the production of ague paroxysms by this vegetation, occured since this paper was partially in type. After exhibiting, about the first of November, a large pan of soil, covered with this vegetation, to the class in one of my lectures, I placed it under the working-table in Dr. House's office. It was loosely covered with a newspaper, and forgotton. In a few days the doctor began to have pains in the back and limbs. These symptoms were soon followed by a well-marked paroxysm of ague. As soon as this occurred the pan of plants came to mind and was removed.

These derangements consist in the altering and enlarging of glandular structures, and in inflamations and alterations in structure and function of the mucous, epidermic, and serous surfaces. All other abnormal manifestations are either symptomatic of these, or are the result of previous disease in the organism.

All the glands in the body belong, strictly, to epithelial tissue, and are made up mostly of parent epithelial cells. These structures are affected in time and extent apparently in proportion to their importance in either organizing and assimilating products for nutrition, or disorganizing those for elimination.

Of all the lesions met with in fatal cases, those of the spleen and liver—most important organs of the body—are the most frequent. The spleen increases in bulk and consistence; its structure is easily torn; its interior often being found to be broken down, and composed of a blackish-red pulpy mass, with which are mingled fibrinous portions of a lighter color.

Morgagni gives one case where the spleen weighed eight pounds; and another is mentioned by Bailly that weighed nearly ten pounds, the structure being entirely converted into a pulp. The spleen has been occasionally ruptured, and the broken-down and altered tissue emptied into the abdominal cavity. This indicates an altered condition in the organizing processes of the parent epithelial cells of the organism, by which the fibrinous matters and other products of the blood formed, become deposited in the splenic tissue, thus producing enlargement (so-called ague cake) which often, if the patient is not removed from constant accessions to the disease, and the exciting cause not eliminated from the organism, results sooner or later in disorganization, and frequently in disintegration of the gland. The liver is also in some cases found greatly enlarged, but altered but little in structure. In others it is softened or filled with black blood, or tuberculated, or containing purulent deposits.

The pancreas is also frequently hardened, so as almost to resemble scirrhus. The mucous membrane of the stomach, duodenum, and small intestines are likewise sometime involved.

The mesenteric glands are frequently enlarged, and are subject to very nearly the same derangements in function and structure as the spleen.

The exciting cause, inhaled, taken into the system in food and drinks, and absorbed by the skin and mucous surfaces, comes in direct contact with the epithelial cells, spread over and covering the entire body, both internally and externally, wherever there are any ways by which external bodies may enter the organism. The epithelial cells, hence make up the first tissue of the system with which these poison-bodies come in contact. These cells they have to pass through before they can enter the systematic circulation and reach the vascular tissues. In passing through these cells, they derange them so as to poison the products they organize. In this way the other tissues, including the ganglionic and cerebro-spinal systems, become involved. As the epithelial cells of the glands, especially those of the spleen, mesentery, and liver, are the most largely engaged of any in organizing nutrient products for the other tissues, these glands are the most severely taxed, and are the first to suffer extensively from the poisonous palmellæ, and hence it is that in these we find so frequently grave lesions.

When the tissues have become poisoned to a certain extent, there is a reaction on the part of the system, an effort of nature to eliminate the poisonous products already in the body. This effort is the paroxysm, which constitutes what we call the disease.

We can readily see how it is that the blood of the body should become thin (deficient in fibrin) as soon as the functions of the spleen are partially or wholly suspended. This being the gland which organizes fibrin more largely than any other, if its function in this respect be suspended by the blocking up of the *oval splenic bodies* with partially organized fibrin, one great source of this product would be cut off from the blood. The fibrin already in the blood becomes deposited in the tissues, and one important source being cut off, the blood becomes thin and deficient in this body This thin blood fills up all portions of the organ not occupied by masses of fibrin, and hence the ease with which the blood contents of the spleen may be washed out. Whenever the whole mass of the blood of the body becomes very abnormally thin, we may look to the spleen for the primary lesion.

Some of the interesting symptoms of intermittent fever, where the spleen is involved, Dr. Tweedie says, are "depression of spirits, torpor of mind, inactivity of body, with much muscular debility, deadly paleness, or a yellowish hue tending more to black or green than in ordinary hepatic disease. There is great liability to hemorrage from various regions of the body, to dropsy, to dysentery, and to ulcers of the legs. The spleen is liable to take on a morbid condition in continued fevers, as well as in intermittents. Diseases of the heart, stomach, and liver, are liable to be accompanied by diseases of the spleen. The spleen is more liable to be affected with disease in damp, marshy localities than in other situations. In intermittent fevers there is a diminution of red globules and fibrin. Softening and the breaking down of the spleen are common in intermittent and continued fevers, in scurvy, and in some varieties of malignant dysentery."

By understanding the true functions of the spleen, these symptoms and lesions are all traceable to their true cause.

Depression of spirits and torpor of mind may arise from either oxaluric or phosphatic states, or from a defective or suppressed organization of some of the nutrient products of nerve tissue; inactivity of body and muscular debility, from a deficient supply of fibrin to muscular tissue; the yellowish hue, to a defective supply of red globules ; the great liability to hemorrhage in different parts of the body, dropsy, and dysentery, to thinness of the blood, and the defective supply to it of its normal products.

The probable reason why the spleen is so liable to take on a morbid condition in continued fevers as well as in intermittents, is that the exciting causes of both affect primarily the epithelial tissue, and have a tendency to derange those portions most which are the most actively engaged in organizing nutrient products, the reason of which appears to be that the exciting causes exist alike in the materials we eat, drink, inhale, and absorb through the skin.

The reason why the spleen is more liable to be affected in damp, marshy localities than in other situations, is, that in the former districts, miasmatic poisons impregnate more or less the air, the water and the food.

The reason of the diminution of fibrin and red globules in the blood in intermittent fever is the greater or less suppression of the normal functions of the spleen and mesenteric glands.

Treatment.—Since nature in the last stage of the paroxysm excites all the excretory organs of the body, and especially the perspiratory, urinary, and mucous surfaces generally ; and as these excretions contain spores and plants of the ague palmellæ, it is evident that the sweating stage is a curative process. If so, it points us to important medicinal means as aids in eradicating the poison. These are diuretics, diaphoretics, expectorants, and alteratives. While we should keep quinia constantly in the front rank to impart tonicity to the ganglionic and cerebro-spinal systems and to the epithelial tissue and to control in the body cryptogamic developement, we should use diaphoretics, diuretics, and expectorants freely as eliminators. The nightly sweating of a patient laboring under this disease, might be supposed to result in enervating the system. The reverse, however, is the case. Under active nightly diuresis and diaphoresis, in ague, the sallow countenance rapidly clears up ; the dull eye becomes bright ; the depression of spirits and torpor of mind and body disappear, and give place to the elastic step and tonicity of muscle. The result is, that, even when the system is exposed to constant accession, the paroxysms are not only avoided, but organic lesions, and the long train of unpleasant symptoms are not allowed to get their hold upon the system, the ague poison being eliminated as fast as taken into the organism.

In cases where the patient is removed from the exciting cause, the system is soon thoroughly cleansed, and no ague returns the following spring unless there are new exposures.

The power of the system to resist the paroxysms of ague varies greatly in different individuals, and even in the same individual at different periods. This power of resistance is directly proportioned to the tonicity of the system. Habits of bracing, active exercise, such as horseback riding, will often protect the system against attacks. This is noticed in a marked degree in the cavalry and infantry service of the army. In malarious localities, the former are seldom attacked, if on active duty, with intermittent fever; while the latter are extremely liable to suffer. This is the case when both branches of the service are occupying the same malarious district, and are equally exposed.

Quinia, as a prophylactic, enables the system to resist the paroxysms. It braces up the system, and controls cryptogamic growth till nature can effect a cure by eliminating the malarious cause through the skin, mucous surfaces, and kidneys. Quinia, then, is not, strictly speaking, a curative or specific agent, but simply acts beneficially by controling cryptogamic development, and imparting such tonicity to the organism as enables it to resist the paroxysms, till aided nature can cure the disease by eliminating the cause. Any cause that enervates the system in malarious regions, tends to bring on the paroxysms earlier than they otherwise would appear. Very frequently it is noticed, especially when the system has been under the influence of the disease for some time, and most especially if the disease is contracted in a region where there is a tendency to congestive paroxysms (limestone regions especially) as in the southern part of Tennessee, in Mississippi, and Louisiana, quinia appears at first to have some influence in enabling the system to resist the paroxysms, but soon loses almost entirely its power. In fact, in many instances, it really aggravates the paroxysms, as is evidenced by stopping the quinia entirely. In such cases the skin will be found dry, the mucous surfaces less active than normal, and covered with a scant, clammy mucous secretion, and the renal excretion small; in fact, all the eliminating organs have their functions deranged and their normal action partially suppressed. As long as these are in this condition, the malarious poison is hemmed up in the organism, so much poisoning the tissues that the tonic influence of the quinia rather tends to aid, frequently, the abnormal actions than to restore the normal tone. If, however, the normal functions of the kidneys, skin, and mucous surfaces are restored, with diuretics, diaphoretics, and expectorants, and the spleen and liver properly attended to, quinia again will act beneficially and impart its usual tonic effects and the disease will soon be eradicated, especially if the patient be removed from constant accessions.

It is highly important to constantly endeavor to keep the eliminating organs in a healthy and rather increased state of action, when the system is under the influence of any malarious poison, as it is through these channels that the causes are eliminated. We have, then, in this disease, no such thing as a specific in *quinia*. It simply imparts tonicity to the system, and controles cryptogamic developement, till Nature, aided by remedial means for exciting the excretions, is able to eliminate the poison.

These principles should be strongly impressed upon the mind of the physician who has charge of malarious diseases. Many old and obstinate cases of ague, with the system filled with the malarious poison, and all the channels of egress closed, are being daily dosed largely with quinia, arsenic, and iron with little or no effect, with the view of curing the disease in some empirical and mysterious way by these so-called *specifics*. The very name *specific* should be blotted from medical science, and left entirely to the *quack*, who knows nothing else. There is really no such thing in medicine. All we can do in any disease is to aid Nature, and to follow her as closely as possible in her curative processes, and this we can only do wisely and well, by understanding fully the true cause any pathology of every disease we treat.

In treating intermittent fever, it is of the first importance to correct any abnormal condition of the portal system, and to accompany this by diuretic, diaphoretic, and expectorant remedies, to excite into activity all the eliminating organs of the body. It is impossible to mark out a fixed course for all cases. The following prescriptions will, however illustrate the general plan of treatment:—

R.—Potass. acetat. oz.ij; spts. nitr. dulcis oz j; syr. scill. comp. oz.ss; aquæ menth. pip oz.viij.—M. S. Take from one to two tablespoonfulls, in a glass of water, morning, noon, and night. Every evening, on retiring, take a warm diaphoretic draught.

Also, R.—Quiniæ sulph. gr. xxxij; strychniæ sulph. gr. ½; mass hydr. gr. vj; pulvis capsici gr. xx; ferri lactat. gr. xx; ext gentian. syrup. aa q. s.—Make pills xxxii. S. Take two pills every two hours till sixteen are taken. Every day or every other day after, according to the type of the disease, take four pills two hours before the time for the paroxysm. At the end of ten days, take two pills every two hours till sixteen pills are taken, and continue as before for ten days more, then take sixteen more pills. By this time, if the eliminating remedies are kept faithfully up, the patient will be thoroughly cured, if he is not exposed to constant accessions. If he is, the eliminating organs must be constantly kept excited, that the cause may be removed as fast as it enters.

Under this treatment a paroxysm need never occur after the commencement of the remedies.

The means are within our reach for *removing the prolific cause* of intermittents. Rich, humid, low grounds, which produce ague plants abundantly when they are new, undergo some change by culture and drainage, that unfit them for the growth of the palmellæ. As the malarious portions of the country become older, and the low, humid, rich grounds become drained and cultivated, ague districts will become more and more circumscribed, and intermittents proportionally decrease. As long, however, as there remain in such localities, pools, ponds, ditches, and streams, the beds of which are liable to become more or less dry during the warm summer months, intermittents may be expected, to a certain extent, to prevail. These sources of the disease, however, may be much lessened by turning the open ditches into blind ones, draining pools, swamps, and ponds, and subjecting the soil of their beds to repeated cultivation. By this process, intermittents, which now extensively prevail over a large portion of our richest districts, may be so circumscribed in their limits as to be no longer a dreaded accompaniment to the most fertile agricultural sections of our country.

Where it is necessary to make excavations, during the warm, dry months, in new, rich, humid soil, the bottoms and sides of these excavations, with the earth removed, should, at the close of each day's work, be plentifully sprinkled over with caustic lime. If this precaution be well attended to, the ague plants will not develop. It is also highly desirable, in making ditches through malarious soil, to keep the bottom, sides, and thrown-out earth well sprinkled with lime.

As fast as the beds of streams, ditches, pools, and ponds, in ague districts, become dry, they should also be well strewn with caustic lime. This is especially desirable, in this climate, during the months of July, August, and September.

When new prairie land, or new, humid, low ground, is being turned up for the first time, and lime can be readily obtained, it will save much sickness by sowing it over with a good top dressing of caustic lime. If one application is not sufficient to check the growth of ague plants entirely, a second should be made. This application will by no means be lost on the soil, as it serves to neutralize acidity, convert resinous matter into soluble soaps; and the soil is thereby rendered more fertile, and that its increased and better crops will more than pay for the lime application. If lime cannot be obtained, wood-ashes may be used, though their effect will not be as marked or enduring. In selecting camping-grounds for armies, or locations for hospitals, new soil and low prairie, or other humid grounds, should be avoided as much as possible. Wherever open ditches are made, streets excavated, wells and cellars dug, or new earth thrown up or exposed in any way to the drying influence of the sun and atmosphere of May, June, July, August, and September, and especially during the two latter months, if the region is at all malarious, caustic lime should be freely strewn over all such excavations, and over the heaps of soil removed.

Influence upon the System of the Pollen and Volatile Principles of Phænogams when inhaled.—The spores and exhalations of cryptogams are not the only bodies in the atmosphere that excite, when inhaled, abnormal and diseased conditions. During the active flowering of phænogams, the air becomes loaded in their vicinity with the pollen of the flowers, and volatile principles of the plants. These matters are inhaled in large quantity by those breathing the atmosphere containing them. If the plants produce no innocuous or active medicinal principle, the pollen and exhalations, except in particular instances hereafter referred to, have no abnormal influence upon the organism. But if they produce poisonous products, or active medicinal agents, the influence of the pollen and volatile principles inhaled is readily felt.

In passing through or past a field of hops, lettuce, or poppies, in flower, a sensation of drowsiness is soon felt, accompanied often by lassitude and indisposition, either to mental or physical action. In passing through a field of stramonium in bloom, or tobacco, similar sensations follow, with nausea, weakness, a tired sensation about the eyes, followed by pains in the head, &c. In passing among the plants of conium maculatum in flower, drowsiness, with a stiffness of the eyes, followed by swelling of the orbital tissues, and a dull pain in the eyeballs and forehead are the result. These symptoms vary much in severity and duration, according to the time the system is under the influence of the deleterious agents, and the quantity inhaled and absorbed by the surface.

In passing among poison ivy (*Rhus Vernix*) when it is in flower, the effects are often so powerful, especially when the air is damp, and during the night, as to produce extensive œdematous swelling and inflammation resembling erysipelas. The pollen of several species of lobelia excite nausea and giddiness. There are many other plants that possess powerful medicinal and poisonous agents, growing in our forests and upon our prairies, the pollen and volatile principles of which, when inhaled, produce marked derangements.

Many exotics of the greenhouse come also under this head. The flowers of all such plants should be avoided as much as possible. Many of those unpleasant sensations experienced by travellers and explorers in a new country, while passing among luxuriant plants and beautiful flowers, arise from the inhalation of the pollen and volatile principles of this vegetation. No doubt many diseased conditions may have their origin in such exposures.

Dr. Isaac Hays, editor of the *American Journal of the Medical Sciences*, detailed to me a short time since some most interesting instances, that had fallen under his observation, of the influence of the pollen of the rose, and also several cases of the influence of the pollen of, and exhalations from, the cereals and other phænogams upon particular persons.

The exhalations from certain plants, when not in flower, produce, on some persons, marked effects. As an instance of this, the poison ivy (*Rhus Vernix*) may be mentioned as producing violent symptoms of poisoning, in certain cases, without ever coming in contact with the plant. Such susceptible persons are able to distinguish its presence before they are able to see the plant, by the effect of the air upon them.

Some are highly susceptible to ipecac, it producing peculiar symptoms upon them by simply being in the room with it. Calomel will also frequently excite temporary salivation and nausea in some by simply handling it.

Numerous other instances might be added to those already briefly referred to, to show the effects, upon either some or all systems, of extremely minute portions of certain bodies when inhaled. It indicates to us the probability that the atmosphere may contain many of those subtle causes of disease, which have thus far eluded the search of so many long and patient enquirers.

In conclusion, I may state that this paper presents merely a brief of the investigations in this direction. All the microscopic descriptions, with six plates of illustrations, and many detailed observations and experiments, are omitted, on account of the whole being too long for an article in a medical journal.

Febris Intermittens et Remittens.

INTERMITTENT AND REMITTENT FEVER.

It would seem to be presumption in any one now, to attempt any improvement in the history or pathology of the above diseases, especially for a southern community, where every one is able to cure these diseases. Notwithstanding all this, I have undertaken the task, and have introduced these subjects as a continuation of the history of malarial fevers. The very able paper upon the cause of Malarial Fever, in the February number of this journal, from the pen of Prof. SALISBURY, has, in my humble opinion, settled the etiology of this class of diseases. Ever since I heard the lectures of Prof. J. K. MITCHELL, upon this subject, I was disposed to believe in the cryptogamic origin of intermittens, &c., though I did not have demonstrative proof of the fact; and my faith had been shaken in this belief, by reports from Prof. LEIDY, of his examination of the marshes with the microscope, and could find no trace of any spores, cells, or fomites that could be considered the cause; and he had set aside my belief in there being any more truth in Prof. MITCHELL's theory, than the thousand other theories that had preceded it. But now we have another Richmond in the field, and he has fairly won his spurs. If his facts are true, his conclusions are inevitable, so far as his theory of the etiology is concerned. But I have not the same confidence in his opinion of the "*modus curandi*" of the salts of quinine. Nor have I any confidence in the opinion expressed by Dr. SHAW, in the Nov. and Dec. No's of the "Saint Louis Medical and Surgical Journal," of the identity of the congestive type with cholera. These two papers have induced me to take up this subject, and I shall express myself fully and freely—and I claim to have some experience in all the forms of malarial fever. Having been raised in the Mississippi bottom, and practiced medicine there for eight years, and eight in the Brazos, so of these diseases, I can speak what "I do know, and testify of what I have seen." I gave, in the January No.

of this journal, my experience in reference to the congestive type. I also, herewith, re-produce an article on the spleen, from the New Orleans Journal, which was written at the suggestion of Prof. BOWLING, of Nashville, who stated in his lectures, that the spleen never suppurated below the latitude of 35 deg., and gave as his authority the late Prof. DRAKE. Now, in *this paper*, I shall, as much as possible, endeavor to avoid repetition; but nothing I have read or since seen, has, in the least, changed the opinion there expressed.

Febris Intermittens—Intermittent Fever.—This is the mildest form of malarial fever or, as it may be more specifically designated, gemiasmatic (earthmiasmatic) fever. Miasms may be from animal or vegetable origin. It may be from the effete of the human body, or from aerial or telluric gasses; but I will assume that Prof. SALISBURY is right, and that this class is produced from the spores of the different Palmellæ.

SYMPTOMS AND VARIETIES.

Intermittent Fever is described by its name—it is a *fever that intermits.* It is diagnosed from Remittent Fevar, which never ceases but abates at some time during its diurnal course.

In intermittent Fever, we have a complete intermission at some time in the twenty-four hours after the first chill, or the commencement of the stage of depression. This intermission may be only for one hour. but if there is a complete intermission; no heat of skin; no increase of pulse; no excited respiration; we call this an *Intermttent.* If there is a lessening or decrease of the pulse, with a lessening of the heat of the skin, and also of the respiration, but not complete intermission, we call this *Remittent*—whether this remission last from one to several hours; all we wish to know is, that there is a complete Paroxysm; that it has gone through the regnlar stages—*Chill, Fever, Sudorification, Restitution.* Without these stages, we call the fever *Febris.*

Febris Continua Communis—Common Continued Fever.—This may also arise from gemiasma, and I shall class it under the head as arising from this cause, and therefore belonging to this genera; it being that form of Malarial Fever in which there is no intermission or remission of the fever; or, to be more specific, no perceptible abatement of the fever after the first chill. The three stages being blended into one, and making no change perciptible to patient or physician, that is either subjectively or objectively: no great change in the heat of the skin, the beat of the pulse, or perceptible sudorification.

VARIETIES OF INTERMITTENT FEVER.

Febris Intermittens Quotidiana—Daily Intermittent.—This variety is known by a distinct *chill*, a rise of *fever*, (heat of skin,) a *sweating* (sudorification) and a stage of *Apyrexia* (Restitution) once every day, or once in twenty-four hours. This chill may come on at any hour in the twenty-four; it may last only a few minutes, or it may last for several hours. It is followed by heat of skin, which may also last only for an hour, (I believe this is the shortest time I have seen in any case) or it may last twenty or twenty-three hours; when it is followed by a cooling down of the skin, and a perceptible moisture of its surface. This moisture may scarcely be perceptible, or it may be in large drops of sweat on the hands and forehead, and a general wetting of the clothes and bedclothes.

CHILL.

This may be only a few cold streaks running up the back, or it may be so severe as to chill the whole body as cold as death—the breath even being cold. The hands and the feet may alone get cold, and there be heat of the body. The skin may shrink. forming the cutis anserina (goose-skin); the nose and lips may become bleached, cold, and sometimes livid; the finger nails become blue; the voice weak and tremulous; or the patient may shake in every muscle, and even shake the bed; and I have seen cases that shook the room.

This chill is generally attended with pain in some part of the body, and a general bad feeling; a malaise; pain in the head, back, bones, or any of the viscera. I have seen it affect alone the mammæ in women and the testicles in men; there being at the same hour each day, an acute pain in the breasts, accompanied with rigors, and followed by fever; or the testicles become painful with rigors, and followed with fever. Most usually the head is the seat of pain—feels hot; throbs; patient becomes dizzy; head swims; turns blind after stooping, with white spectre floating before him for several seconds. The stomach is next usually involved: patient is sick at the stomach; vomits or eructates, often, large quantities of yellow bile; but often, bile of a dark-green leafy character. The bowels may move, and in some forms, the stools will foam like soapsuds; will be white like milk, mixed with the usual alvine evacuation. Sometimes patient will urinate blood in large quantities (See Article Congestive Fever). Sometimes the lungs may be involved, and the respiration may become oppressive; and when the fever arises, may be emphatically called *snorting*. I saw one case of congestion of the lungs which proved fatal, in spite of all I could do, in the first chill; being present when the woman, a stout negress, came from her field work with a chill on her, dying the next day. Post mortem revealed the lungs completely congested, and as solid as the spleen, and much like a hypertrophied spleen. I have seen it affect the eye alone, and also the internal ear, as the breast and testicles—no pain being felt anywhere except in these organs. I have also known it to affect the sciatic nerve, and I may say all nervous centers—fever following the chill, with this acute pain at a particular hour of the day.

MOST USUAL TIME OF CHILL.

I believe I may safely say, that more than two-thirds of the chills come on between day-break and 12 o'clock: next most frequently from 12 M. to dark: next from dark to midnight; and lastly, from midnight to day light. I believe nine-tenths occur from daylight to dark, chills at night being the exception. The time of attack is no doubt controlled by the time of exposure to the external air that contains the poison, and to rain and change of temperature. I am fully satisfied of this, from my experience in the army. Of those doing guard duty, the greatest number had chills at night. This was so much the case at this post, that I often thought they were Malingers, and ordered the seargents to watch them, and see if they had a rise of fever after the chill; and would not excuse them from duty unless they reported at the time. I have, also, observed this in the negroes, who are out much later than the whites, and live in much more open houses, and with less covering. They have chills much oftener in the night than the whites. Chills are much more frequent in wet than dry weather, and on sudden changes from warm to cold, and less from cold to warm. The season has also great control over chills. They are more frequent in September, (where I have practiced,) than any other month, and less frequent in May. I think I may safely class them thus, for the twelve months: September, 18 per cent.; August, 16; July, 15; October, February and June, 10 each; November, 9; December, 8; January, 5; April, 2; May, 1. Thus, during the summer months, June, July, and August, 39; Fall—September, October and November, 38; Winter—December January and February, 18; Spring—March, April and May, 9. Of primary attacks of persons coming from healthy districts, I believe at least 90 per cent. occur in June, July, August and September. If they escape September, they are not liable to have them until the following June.

Fabris Intermittens Tertiana—Second Day Chills and Fevers, Intermittent Fevers of Alternate Days.—There is nothinig peculiar in this form of Intermittent Fever. It has the same stage—*Rigors, Calorification, Sudorification, Restitution.* This is usually the mildest variety, and I believe the only TRUE TYPE OF THE DISEASE. When the Quotidian Type appears, it is a double Tertian, and consequently is much more severe for the stage apprexia (Restitution) is shorter and the system does not have time to rest. I am so thoroughly convinced of this being the trne type, that in all cases of Quotipian, I give quinine two days in succession, whether the patient misses the first day or not; but when I have broken the tertian type, I have no fear of a return on the fourth day. I apply this to all the various types whether Febris Congestiva, Quotidiana, or Tertiana. In *Febris Continua Communis;* assuming that these stages are massed, I give quinine each day until the fever is broken; watching my patients closely to find the hour the chill should come on. Now, I am led to these conclusions from the fact, that partially check a remittent, and it becomes an intermittent; partially break a Quotidian, and generally it will continue the second day: so, also partially stop a Tertian, and it will appear on the fourth day; making a Quartana with the same stages as the other varieties. Then we may reduce all these varieties to one type, the Tertian, so the whole class might be arranged under this one head; but as the types are well marked, it is best to retain their present nosology.

The books speak of Septinians. Octans, &c. I have never seen these. I do not believe in their existence, but believe that they are the result of treatment; the treatment not being continued sufficiently long to destroy the cause, and these are relapses. I have never known a chill to come every fourth day, and continue to come every fourth day; it will, on returning on the fourth day, take the Quotidian or Tertian type, and so continue to recur until relieved by medicine; or by increasing the morbific cause, we have a double Tertian, viz: a Quotidiana. These Quotidians may occur with a paroxysm in the morning one day, and in the evening the other; showing most plainly that they are double Tertians. Again, we may have a chill in the morning and another at night in the same twenty-four hours, and one day and night (24 hours) free from the fever; showing the patient is laboring under two Tertians occuring on the same day. But all these different varitics are very rare, and according to my experience, in the following proportion:

Fbris Intermittens Tertiana,	50	per cent.	
" " Quotidina,	40	"	"
" Remittens,	5	"	"
" Continua,	3	"	"
" Quartidiana, et ammia Genera,	2	"	"

The Remittens are most common in June, July, August, and September; but seldom occur in the other months, unless complicated with pneumonia, &c. The Quotidians, also, are most usually confined to the above-named months, and their occurrence in the other are the exceptions.

Febris Continua Communis may be diagnosed from *Febris Typhus* and *Typhoides* by the tongue being covered with red, white, or brown fur; by the skin becoming at times moist; by the want of ulcerations of the solitary or agminated glands; want of sordes on the teeth; by tenderness over the liver and spleen, and by considerable induration of the spleen; by the want of bile in the stools, and the exemption from grumous watery discharges—stools being mucous, scybillæ, and usually attended with constipation. This type is often produced from improper treatment, in which quinine has been given and stopped the chill and sudorification; but left the system depressed, and the liver and abdominal viscera generally in a congested or inflamed condition. Hence, quinine rarely relieves these patients until efficient evacuants and mercurials have been used, to subdue the congestion and inflammation. When the fever, in these cases, are once broken, they are, as said before, liable to become Quotidian or Tertians, showing their generic origin.

PATHOLOGY.

All forms of this Gemiasmatic Fever more particularly affect the Liver, Spleen, and Stomach. These are more or less affected in every instance, whether the mildest tertian or the most malignant congestive. They are each liable to congestion and inflammation; but as I have dwelt sufficiently on its pathology in the other papers, I shall not re-produce them. I have never seen a fatal case of either Qotidian or Tertian without congestion or inflammation; but they are prone to these results during the summer months—more particularly do we have congestion of the brain and corda spinalis, and the liver and stomach.

during the hot seasons: congestion of the lungs in winter, and congestion of the intestines in the spring and fall.

I do not believe that the congestion of the intestines, in this fever is like the collapse of cholera; and I know the the two diseases to be perfectly distinct. One may stand over a Congestive Fever for days; may sleep in the same bed, live in the same town or house for years, and not have a sick stomach. I have known men to live twenty years in malarial districts, and never have a chill. Can we say as much of one exposed to Cholera? I trow not. I know I would be afraid of the trial; and I have slept with hundreds of cases of Congestive and Intermittent Fever and never had even a head-ache. Then, I wholly condemn the opinion expressed by the contributor to the Saint Louis Medical and Surgical Journal. I *believe*, I *know*, Cholera is infectious. I believe, yea, *I know*, *Intermittent Fever is not.* I know Cholera will not return regularly on every day or every other day, and I know Intermittent Fever *will.* I know Intermittent Fever is an endemic disease; I know Cholera is not, in this country. It is a disease of one paroxysm. Intermittent Fever is known by its regular return. I believe the causes are different—yea, *I know it.*

TREATMENT.

This must be adapted to the four different conditions. Rigors, Calorification, Sudorification, and Restitution.

Rigors.—During the chill very little should be done, or is necessary, in the mild forms—simply in going to bed and covering up warm with blankets. If there is much nausea, apply sinapisms to the stomach, and give $\frac{1}{8}$ to $\frac{1}{4}$ gr. of Morphia, and apply hot bricks, or bottles filled with hot water, to the feet and hands. Give stimulants of brandy or whiskey: by any or all means keep the skin warm, and prevent the internal congestion.

Calorification.—The heat may be controlled by letting the patient drink freely of cold water. Give Sweet Spt. Nitre and Aconite. If there be much pain in the head, give at once mercurials. I usually give

R Hydr. Chl. Mitis.
Ext. Taraxici.
Rhei Pulveris, xii grs.
M. F. Pills No. 6.

S. Give three at once and the other three in three hours.

This combination generally acts well without castor oil, which is

usually so disagreeable to many patients. If this should not act freely, I usually give R Hydr. Chl. Mitis.
Pill Hydr. x grs.
M. F. Pills No. 3.
S. Give at once.

I thus excite the liver and subdue congestion and prevent inflammation. This being done, I leave my patient to rest and quiet, until about six hours before the next chill should return. I then begin with Quinine Pills.

R. Qui. Sulphatis, xii grs.
Ext Sarsaparillæ, xii grs.
M. F. Pills No. 6.
S. Give one every hour, until all are taken.

I make it a point in all cases, to give enough Quinine to affect the head, to produce roaring in the ears, or perfect quinism at the hour of the expected chill. If I do not see my patient until one hour before the chill, I give the ten grs. at once and stop the chill, and give at night the Mercurial, and the next day the Quinine and Taraxicum.

Where there is a tendency to drosical effusion, and an enlarged spleen, I give the Quinine with Iron and a diuretic. Thus:

R. Qui. Sulphatis.
Ferri Lactatis, aa xii.
Ext. Digitalis, iii grs.
M. F. Pills No. 6.
S. One every hour until all are taken.

I use also in these cases Qui. et Ferri Citras, Qui. Sulphas, equal parts. Quinæ Sulphas and Ferri et Potassæ Citras, equal parts.

When the chills come by habit, or has lasted for months, or years, I give the following:

Quinæ Sulphatis, i dr.
Acid Arsenioci, ii grs.
Ext. Sarsaparillæ, ss dr.
M. F. Pill. No. 30.

S. Take one every two hours until five are taken each day, continuing daily until all are taken. This hardly ever fails to completely break them up, and they are not apt to return, and if they do, repeat every ten days these pills, allowing the patient ten days rest. I am particular to see that the arsenic is intimately mixed with the other ingredients, and if there be any swelling of the eyes or face, stop at once and resort to the Quiniæ, Digitalis and Iron pills, or simply Quiniæ et Ferri Citras, in three grain pills every two hours before the chill comes on. I have learned from practice the amount of qunine each patient will require to stop a chill, but rarely more than twelve grains are necessary, if the patient be under its influence at the time the chill is expected, but I have been compelled to give as high as xviii grs. to a boy three years old to stop a chill, having tried smaller doses and failed. So I have given as high as sixty grains to an adult and stopped the chill, when I had tried xxx and failed. When the tongue is foul, and covered with white fur, I usually give the quinine with some stimulant, thus :

Qui. Sulphatis, xviii grs.
Olei Piperiti Nigri, vi gutt.
Ext. Sarsaparillæ, xii grs.
M. F. Pills. No. 6.

S. One every hour until all are taken, or I use piperine instead of the oil when the latter disagrees with the stomach, which it will often do. This *plan never fails* when pursued sufficiently long, and actively enough to suit the case. Often, though I have had to give much more Calomel than here recommended to produce a complete revultion of the secretions from the bowels. I never give it with the intention of severely purging my patient, but simply, to excite all the secretions, I move the mercury off to prevent tyalism, which is wholy unnecessary, very injurous and painful. I never use Emetics (proper) unless in the continued type, then I often use the following :

Hydr. Chlo. Mitis, x grs.
Antimonii Potassæ Tartratis ii grs.
Ext. Taraxici, x grs.
M. F. Pills No. 3

S. Give at once. This will often check the fever, and produce gentle vomiting, move the bowels well, preparing the patient for the quinine I frequently give Leptandrin and Podophilin with Calomel. But these are two active in their purgation and frequently nauseate and the Mercurial is about as effectual without them, as with them.

GENERAL REMARKS ON TREATMENT.

As I said in Congestive Fever, quinine and mercury will cure all cases, other remedies are mere adjuvants and placeboes. They must be added according to the special pathology of each case, and are not really necessary to the successful termination of any case. In the Brazos or Mississippi bottom, I would not feel that my patient was safe during the summer months, unless I knew I had given him enough of quinine to prevent congestion. I have never tried any thing that I could rely on implicitely, except it or some of its various preparations, given in the above named strength. When I have done this I can go home and sleep soundly, assured I will find my patient alive and improving on the next day. You can stop and often cure Intermittent Fever with a thousand things, but not so easily in a malarial district in the summer, none of which would I recommend when I had the above at hand or could procure them, but it may be so you cannot get them, you should know how to treat cases without them, and I will simply state the substitutes for CALOMEL.

A. 1st and best Emetics. Given in the first paroxysms, these cause a full flow of bile, and produce profuse perspiration if given before the stage of inflammation. The best of these are Tartar Emit. Lobelia and Ipecac.

B. 2d. Purgatives, Leptandrin, Podophillin, Taraxicum and Sulphate of Manganese. This latter salt is of much value in cases of enlargment of the spleen, and general æenemic condition.

C. Blisters over liver, stomach and spleen. These will often restore the secretions without anything else, but they are severe remedies.

D. Bleeding. This in the continued form does good but should never be used in the other varieties. We are liable to have fatal congestions diarrhœas, and a tedious convalescence.

C. Cupping over the oppressed organ, always does good, but scarcely ever necessary ; the patient being relieved without it.

SUBSTITUTES FOR QUININE.

A. Sudorifics. The best and most successful is a decoction of shucks or fodder, and drank warm, every hour or half hour as qunine is taken.

B. Salicin. This is never certain, but often successful, so are teas of the bark of the willow, and its extracts.

C. Tea of the bark, or extract of the button willow, cephalæ. Occidentalis.

D.. Solution of Brandy and Camphor, (camphorated spirits). This was much used by the hunters in the Mississippi bottom. Given to their patients tablespoonful every hour, just as we give quinine. It was from them I learned the use of fodder and shuck tea.

C. Corn Meal. Tablespoonful in a glass of water just before the chill.

D. Shower Bath. This will do where the chills come by habit, and where patient has removed from the malarial district, or where there is congestion to insensibility with excessive heat of skin.

E. Excitement of any kind at the expected attack, or stimulants.

SALICIN.

Salicin I have used in from three to five grain doses every hour, with success; but it is not certain, and is more costly than Quinine when used in sufficient doses to cure a case.

CHLOROFORM.

I have tried this in from ss dr. to i dr. doses in a glass of water, or dissolved in Olive Oil or Glycerin, given every two hours about the time of the expected chill. Surgeon GANSLEN and Prof. A. P. MERRILL have used Chloroform with success, and speak in high terms of it.

CORNUS FLORIDA.

The different varieties of this shrub have been used, both in Extract and Tincture, with success. I believe it has considerable virtue, especially when combined with quinine.

FOWLER'S SOLUTION OF ARSENIC.

The Liquor Arsenialis, combined with any of the vegetable tonics, is very successful; especially when patient is removed from the infectious district; though I much prefer the Arsenous Acid combined with Quinine, as given in the treatment.

Prophylactics. The following are beneficial; use of pepper for food; drinks of strong coffee; morning drams; fire in apartment at daylight, and closed windows and doors at night; use of cistern or spring water. No pool or running water, in a malarial district, should be used; keeping the feet dry and warm; and living upon rich and generous food.

GENERAL REMARKS.

I have not tried the sulphates of potash and bromine, after the Italian plan, but I know the use of sulphates of soda and magnesia will produce the disease in the malarial districts, and have no faith in

Polli's theory, of the sulphates destroying the zymotic action in the system. I believe the good effects of the salts of mercury and arsenic result from their power to destroy the primordial cells in the system, whether they be animalculæ or palmellæ. Nor do I believe the good effects of sulphate of quinine are due alone to its tonic power; for we know that unless the system is under its influence at the expected chill, and the chill returns, we will have to give the same amount of quinine the next paroxysm—almost as much as if we had not given any; and hence the importance of giving the quinine during several hours; and where there is no perceptible paroxysm, to give it during the whole twenty-four hours, and the fever will abate the next day. We could do with much less quinine if we knew the exact hour, and would give all our quinine at once. I believe we might lessen it at least one-half, say vi grains, given one hour before, is more efficient than xii given for six consecutive hours. We are forced to extend this time; for if we wait, the chill may come on one hour earlier, and we will be too late; and again it may be postponed, and the effect may go off and the chill then return This will often happen under our present plan, unless we quinine our patient and keep him so until several hours after the time of the last chill. Quinine has an immediate and direct effect. All its salts have the same effect, and are equally efficient if given in the same doses, whether valerianate, citrate, ferrocyanate, &c. If the Italian theory was true, the sulphate alone would do good; and if it owed its virtues alone to its tonic effects upon the brain, it would have the more good effect if given just after the chill than just before the chill. It is just as efficient to stop the paroxysm when given with fever, as when the fever is gone, provided there is no inflammation in the system, and it is kept up until the chill should return. It is no use to give it immediately after the chill, and it will usually aggravate the symptoms, causing deafness, headache, and amaurosis. I believe it gives vitality to the blood, and prevents stagnation and death of the globules, and thereby prevents it from becoming the nidus for these palmellæ, and this sustains the miscroscopic pathology of Drs. and Meigs, which has been but recently advanced.

It will be seen from the above papers, that we are still in the dark on many points connected with well-known and well-described diseases; and one over which we have more remedial control, than any other of which I am familiar. Any southern planter, though he may not know a letter, can treat, and usually very successfully; using but three articles, calomel, quinine and castor oil—they usually giving from x to xx gr. calomel; and in from four to twelve hours, i oz. of castor oil, and then from xii to xxx gr. of quinine. This never fails unless they mistake the disease, or there are complications which they do not understand. I may safely say, that the stewart or overseer on our plantations cure more than 75 per cent. of these cases, without consulting a physician.

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Observations on the Anatomy, Pathology, and Treatment of the Spleen

By Greensville Dowell, M. D.

ANATOMY OF THE SPLEEN.

The spleen is a ductless gland, situated and lying in the left hypo chondriac region. It is an oblong, flattened body, of dark blueish red coller, about five inches in length, and weighs about six ounces in its natural and unexcited state; but varies a good deal in size during digestion, even in perfect health. It is spongy and vascular in texture. The external surface is convex, the internal slightly concave It is indented along its middle line and pierced by numerous vessels, which form what is called its *hilum liens*, being irregular openings to admit its large vessels. Its posterior aspect is obtuse, its anterior sharp and notched. The upper extremity is larger than the lower, and somewhat round; the inferior is flattened. By its external or convex surface, it is in relation with the diaphragm, which lies over it and separates it from the ninth, tenth and eleventh ribs; by its concave surface with the greater end of the stomach, the external extremity of the pancreas, the gastro-splenic omentum and its vessels, the left kidney and supra-renal capsule, and the left crus of the diaphragm; by its upper end with the diaphragm, and sometimes touching the left lobe of the liver, and by its lower end with the transverse arch of the color on its left extremity. It is connected with the stomach by the gastro-splenic omentnm, and to the diaphragm by a fold of peritoneum, called the *suspensory ligament*.

It is said by Gross and others, that there have been found from one to eight or ten small spleens, about the size of a hazelnut, and from that to a walnut, connected with the spleen proper by the splenic artery to which they are directly attached. They are called by anatomists *liens succenturiati*. They are generally found near the greater end of the stomach I have never seen any of those bodies.

The spleen is invested by the peritoneum and an elastic membrane peculiar to itself, which enables it to yield to greater or less extension by its blood vessels. This elastic tissue forms sheaths for all its vessels in their various ramifications. From these sheaths small fibrous bands are given off in all directions. These fibrous bands, called trabeculæ, by their connections form its areolar tissue. That portion included by these sheaths is soft, granular, of a bright red color, and interspersed with malphighian bodies, small white bodies or corpuscles. These corpuscles are believed to be aggregations of cytoblasts inclosed in a kind of capsule of capillary vessels. Seperate cytoblasts are abundantly scattered through the red substance.

The spleen receives its blood from cœlic axis by the splenic artery, which is of very large size in proportion to the spleen. The branches of the splenic artery are distributed to different sections of the spleen, and anastomose very sparingly with each other. The veins are very large, and by their various ramifications compose its principal bulk. The ramifications pour their contents into the splenic vein and help to form the *great portal vein* which finally passes through the liver. The lymphatics are numerous and of a large size; they terminate in the lumbar glands. The nerves are the splenic plexus, derived from the solar plexus.

PHYSIOLOGY OF THE SPLEEN.

The physiology of the spleen is not well understood, but from late investigations we begin to have more definate ideas of its uses and office in the human economy.

Like the other ductless glands, it does not seem to be essential to life. It may be removed or become perfectly atrophied without the patient's suffering material inconvenience. But in all such cases the lymphatics are much enlarged, and seem to perform its office in the economy of nature.

It is now known that the spleen does modify the blood that passes through it, but how the gland acts to produce this modification seems to be a matter of doubt. I believe the blood receives and parts with some of its principles as it does in its passage through the lungs; for we know that the red corpuscles are diminished, and that worn out corpuscles are disintegrated, and in the colored portion of the spleen pulp, corpuscles are found in various stages of degeneration, and those corpuscles help to give it its dark color.

Kirke says (in his Physiology), that "the large size the organ obtains towards the termination of the digestive process, and the increase in the fine granular albuminous plasma within its parenchyma, and the decrease of these materials, appear to show us, that the gland is concerned in elaborating the albuminous or formative material, and for a time storing them up to be gradually introduced into the blood according to the demands of the system." He also observes, that owing to the small amount of fatty matter, it is not supposed that it aids in the preparation of materials for the respiratory process. But is quite probable that it, like the lymphatics, assists in forming germs of subsequent blood-corpuscles as there is a large amount of white corpuscles found in the splenic vein.

Besides these, its supposed functions, it acts, no doubt, as *a diverticulum to the portal circulation.* It is used to contain portal blood (after digestion) with nutritive quality receiving from the food, and it gradually returns to the liver, where it is further acted on before it passes to the lungs, etc. This is also made probable by its enlarging in affections of the liver and heart, tending to impede its passage through them, and by its decreasing when the portal circulation is depleated by discharges from the bowels and from the effusion of blood into the stomach.

PATHOLOGY OF THE SPLEEN.

The diseases and morbid anatomy of the spleen are better understood than its physiology. It is subject to all the various analogous and heterologous formations to which other parts of the body are liable. Inflammation; acute and chronic, abscesses, gangrene, hypertrophy, atrophy; softening, suppuration, etc. In its hypertrophied state, it is also liable to be *dislocated* or *lacerated.* It is subjecied to *induration* and *hepatization*, or sometimes to become *fibro-cartilaginous.* It is liable to atrophy even to entire destruction. Of all the *analogous* formations, the spleen is most subject to hydatids in its substance or on its capsule. It is also subject to fatty tumors and calcareous deposits, sometimes in small bodies like pin heads, one case of which, I have seen accompanied with milliary tubercles in the lungs—which they much resemble, if they were not identical.

Serious cysts are found in and on the body of the spleen. These cysts are sometimes filled with melicerous, atheromotous, steatomotous substances.

There is no pathognomonic sign or symptom of these affections. The spleen is always more or less enlarged in these cases, but they cannot, during life, be distinguished from hypertrophy as a consequence of *fever* Hydatids sometimes become very large and burst into the abdomen and cause death from peritoneal inflammation.

Of the *heterologous* formations, tubercles are the most common, and will be most generally found where there are tubercles in the lungs or mesentery. An interesting kind, I saw in a subject I assisted to dissect at the Louisville University. In this case, the mesentery was completely studded with tubercles, so much so that Dr. Bayless kept the specimen, and it is now in the museum of that college. Melanosis is a rare disease of this organ, but all kinds of cancers are said to occasionally occur in it. None of these affections can be recognised during life. They may be inferred to some extent from the chachectic state of the system, and from being known to be present in other parts of the body.

Metastatic abcesses of the spleen from wounds and surgical operations are said to be common, but not so often as in the lungs, liver, or brain.

Much the most common, of the spleen is an acute inflammation of its parenchyma as an accompaniment or sequel to *fever*, dysenteries and diarrhœa. Acute inflammation of the spleen, if not promptly and judiciously treated, will most generally terminate in chronic inflammatory fibro-cartilaginous induration, suppuration, gangrene or apoplexy. Inflammation of the spleen is a common affection where I have practised. In the Mississippi and Brazos bottoms scarcely any one lives from three to five years without having been subject to this affection. I presume I have seen as much of this disease as any man of my professional age, and can speak positively on this subject. For the last twenty years I have lived either on the bank of the Mississippi or Brazos, or near their immediate vallies Fourteen years on the Mississippi and six on the Brazos ; twelve years in active practice, and eight years under my brother, then in full practice at Raleigh, Tennessee. Inflammation of the spleen, as I said before, is common to every one living three or five years in these bottoms. Whites and mulattoes are much more lible to it than pure blacks. In blacks I have never seen a case of enlargement of the spleen except as a complication of typhoid or rather as a concomitant of typhoid fevers. Griffs are not as liable to it as mulattoes, nor mulattoes as whites. Blacks are partially exempt from intermittent fever, but are equally, I believe, liable to inflammation of the liver and remittent fever. As to affections of the liver, I have not noted any differance in persons of different colors ; nor have I discovered any difference as it respects typhoid fever. I have thought, as a general thing, that blacks are more liable to typhoid fever than mulattoes or whites, but I attributed this to their want of cleanliness, which is observable to any one who is familiar with large negro plantations. I have found the spleen partially enlarged and rather indurated in all cases of typhoid fever, which I have examined after death even in a child two years old.

Acute inflammation, as I said before, is liable to terminate in chronic, and from chronic inflammation, we have hypertrophy as a most usual result, and from enlargement we have dropsy, a general anæmic state of the system, and an impoverished state of the blood.

If the active inflammation is not subdued or modified by treatment, the spleen will soften, suppurate, or terminate in gangrene. If the inflammation alone is attended to, and the patient is not treated for the primary cause, say malarial or typhoid fever, the spleen will become gradually enlarged, and often obtains an enormous size ; many hundred of such cases have come under my observation.

Hypertrophy may come on gradually and even imperceptibly, but may be easily detected by pressure over the region of the spleen.

There is always more or less tenderness on pressure, with flatness on percussion, even before the spleen can be felt. After it becomes large its outlines are easily traced, and from the small size we have described it in health, it enlarges until it covers the anterior cavity of the abdomen, even feeling as if the whole cavity were filled with a solid body. It now causes a protrusion of the abdomen similar to that of a pregnant woman in the ninth month. That the spleen is enlarged may be told also by the general appearance of the countenance and skin. The skin is of a sallow-white color, and may be easily recognized by those familiar with the disease. It may, nine time out of ten, be told by the general appearance of the skin alone, without any tactic examination. In cases of enlarged spleen caused by malarial fever. I have not so generally found the liver implicated, as we are led to suppose from reading the books ; it is often found in almost a healthy condition, sometimes, I may say often, secreting bile too freely. Where the liver is not implicated but acting, I have not found mercury necessary to a cure of the spleen, while in those cases where the liver is diseased also, mercury is almost, if not absolutely necessary to perfect a cure. In intermittent and remittent paroxysms I have found a great tendency to *rigors*, if the spleen be enlarged, or enlarges during the paroxysm ; but where the spleen was not enlarged, or did not enlarge during the paroxysm, the chill and fever generally came on together. Where the teeth are made to chatter, and there is a general shaking of the muscles, the spleen is always enlarged. This may be called a pathognomonic sign, for I do not remember a single exception. While the spleen is moderately enlarged, and before adhesions have taken place to the surrounding textures or organs, the spleen may be easily *dislocated*, several cases of which I have seen : the suspensory ligament is torn, and the spleen turns over, as it were, and falls forward on the colon and bladder, and here becomes fixed by adhesions, so that it cannot be replaced ; yet it may be partially reduced, and the patient may live and even enjoy a moderate portion of health, but always have the shallow appearance which I have described. A case of this kind is now in Brazoria county, in a lad of fourteen years.

Suppuration of the spleen is rare in proportion to the number of cases of enlargement. By some, as the late Prof. Drake, it is supposed never to occur below thirty-five degrees of latitude. This is undoubtedly an error, for I have seen three cases in my county, south of Galveston. W. M. Bradly had his spleen to suppurate in 1853, and and it pointed through the abdominal wall below the ribs, and was punctured by my friend, Dr. F. M. Oatis, of Sandy Point, Texas. It discharged a large amount of dark grumous pus and blood. The orifice healed up ; but he still has an indurated spleen of an enormous size, covering most of the abdominal wall. He is at times dropsical, and has a running ulcer on his leg, as a result of the chachetic state of his system. He is able to ride about, and otherwise enjoys good health.

CASE 2. Mrs. P., of Brazoria county, was taken with intermittent fever in the spring of last year 1858, and it continued to occur during the early part of the summer, until finally the spleen suppurated and discharged its contents into the stomach. She was treated by myself and Dr. Porter of Columbia, with mercury, iodine, blisters, and quinine, or the citrate af quinine and iron, but nothing we could do would stop suppuration. There was a circumstance in Mrs. P.'s case worthy of further note: she was salivated with iodine used as an embrocation over the spleen, while there was no smell of mercury, or any ulcerations of the gums. The saliva poured out of the mouth, until she thought she would suffocate from it. By discontinuing the use of the iodine the salivation soon subsided, though the mercury was continued more or less for two weeks afterwards and without any symptoms of ptyalism. She suffered greatly from retchings and sick stomach. She finally recovered, but her spleen is still very much enlarged.

CASE 3. Mr. Henry, a carpenter of Columbia, had had chills for nearly two years, at irregular periods, and finally was taken so bad that he could not work. He paid a visit to the Guif of Mexico, for the purpose of trying sea-bathing, and while there his chills got worse on him, and he was brought home on a bed. I was called to see him, and used the usual remedies with energy, but could make no change for the bettey. I broke up his fever and stopped his regular paroxysms, but still he did not improve. I blistered over his spleen, which was much enlarged, but could not reduce it. About the fifth day of my attendance he had a hard shake, and thought he was dying. His chill lasted about one hour and a half, and went off with a profuce sweat. It came on him when he had about twenty grains of quinine in his system, which in most cases is sufficient to stop any chill: seeing this I immediately began to suspect suppuration, and I examined for a softening, but could not detect any. His liver was acting well; his stools were bilious; but I thought I could feel the liver lobulated, and it was tender on pressure. He had slight fever after his shake, with a hectic flush on his cheeks. These shakes continued at irregular periods for three days, in spite of all I could do, and he finally died delirous. There was no post-mortum, which I regret; but from all his symptoms, I thought there were several abcesses of small size. His symptoms resembled cases of suppuration of the mammary gland, etc.

HICCOUGH.

I have seen severe and continuous hiccough from an enlarge spleen· One case, I well remember, occurred to me, while practising in Panola county, Mississippi. I was treating a young man for intermittent fever, attended with vomitings and sick stomach. His spleen was enlarged. I gave him some pills composed of blue mass and rhubarb, and followed it with large doses of quinine—ten granes every two hours until three doses were taken before his chill time. This broke his fevers and stopped his chills, and greatly reduced his spleen. But as the spleen contracted, he was taken with hiccough, and it was more distressing than his former situation. I gave him all the antispasmodics I could think of—morphine, camphor, assafœtida, valerian, and warm baths; applied mustard to the stomach, etc., yet in spite of all this, his hiccough continued even during sleep for eight days; at last, not knowing what to do, I salivated him, and as soon as the mercury took effect he began to improve, and with the salivation, he recovered entirely, and has never, as I know of, been subject to this symptom since. I thought in that case, the spleen contracted adhesions to the diaphragm, and the medecines I gave him to cure his fever and ague, had cured his spleen and torn up the adhesions, causing the diaphragm to take a convulsive action. The calomel subdued the inflammation of the spleen and diaphragm, and thereby cured the hiccough.

Gangrene of the spleen I have never seen. Softening is a freqnent accompaniament of hypertrophy. Atrophy I have never seen, and think it very rare. Fibro-cartilaginous and indurated spleens are common. Where an enlarged spleen is reduced by medical treatment, it almost invariably is left indurated, and its coats become fibro-cartilaginous, and its trabeculæ are enlarged and thickened. The spleen sometimes seems to lose its function, and is not easily enlarged by fevers afterwards. It is not an unusual occurrence for a boy, or child, or even for young men, to have enormously enlarged spleens, and to be sent out of the bottom lands to school, to recover entirely their health, and on their return they are not subject to malarial fevers, and especially are they exempt from enlarged spleens. But in these indurated cases the spleen is never found in its natural state or size in healthy persons who have never suffered from enlargement. It never returns to its normal size, and can generally be felt in its place. The spleen in such persons is found after death to be fibro-cartilaginous. The spleen in its enlarged state is often ruptured or lacerated by external violence, by blows with the fist, falls from horses, etc. Several cases of death from such cases I have seen. A case of this kind is reported in the New Orleans Medical and Surgical Journal, by Dr. Chinn, of Brazoria, where an individual died from a blow over the spleen, in a fight The homicide was tried for murder, but upon a post-mortem examination made by Dr. Chinn, the spleen was found softened and easily lacorated, and upon a statement of these facts the man was acquitted. I also knew a young man to be thrown from his horse, and to die in a few days from pain in the region of the spleen, caused, no doubt, from a laceration.

THERAPEUTICS OF THE SPLEEN.

The means of subduing inflammation are as applicable to the spleen as any other organ, and should be resorted to immediately, as in all cases of inflammation. Where it is brought on with or by malarial fever, you must give in addition to mercury, quinine in large doses. Experience has taught us that the spleen can be reduced sooner by quinine in large doses given at once, than by small doses often repeated. Thirty grains given in three doses of ten grains each, are more efficient than thirty grains given in ten doses in twenty-four hours. If there be tenderness over the spleen after you have given an active dose of mercury and quinine in free doses, it is well to apply a blister, which will remove the tenderness and reduce the spleen, if enlarged.

In chronic inflammation of the spleen, with enlargement, I give but little mercury, and that generally combined with taraxacum. Blue mass, often repeated, I have found injurious. It is too slow in its action, and creates an irritation of the stomach ; but if it be combined with some active purgative, as rhubarb or taraxacum, it answers every purpose and does well. I usually give one of the following pills, but much prefer the first where their is fever :

(1) Calomel x grs.
Taraxacum v grs.
Rhubarb vi grs.
Make into four pill ; to be given at one dose.
(2.) Blue Mass xx grs.
Pulverised Rhubarb vi grs.
Make into four pills : to be given at one dose.

If there be no fever, divide this into two doses, and give two pills every four hours. If there be diarrhœa with fever, combine an opiate with the pills, morphia or opium, the latter is best. If those pills do not operate in ten hours, give a dose of castor oil ; if they act too freely their action must be checked by opium : it is not well to let the bowels run off, as we say, in any case. After the action of these pills, or if the case be urgent, begin with the following pill : citrate of quinine and iron xxx grs., extract of genitan or liquorice, sufficient to make into mass ; divide into six pills ; of these, give one every hour until all be taken, beginning in time to get them all taken before the expected chill. If the patient is disposed to be dropsical, I combine also with this pill some tonic. Oil of black pepper is the best, half a drop to each pill. This should be repeated from day to day, until the enlargement of the spleen cannot be felt, or until all signs of chills or fever are gone. The quinine and iron should be taken every cold or wet day, until all appearance of the disease is removed. There is a great tendency to relapse in these cases, which should be strictly guarded against. I have tried iodine in every form and every mode I could think of, but I cannot say it ever did any good when applied to enlarged tonsils ; the functions of the absorbents, or rather the lymphatics, are destroyed by the enlarged spleen, and we must therefore endeavour to cure by endosmosis instead of by intestinal absorption, hence, the great good which blisters do in this disease. Blisters should be small, and be often repeated. I have now abandoned the iodine treatment, and since I succeed much better without it. I never fail by blisters and citrate of quinine and iron. This preparation is the best of all the various compounds of quinine, in cases of enlarged spleen, or in anæmic conditions of the system. The bowels must, in all cases, be actively moved at least once a day, especially where there is a tendency to dropsy. In dropsical subjects, after giving the above pills, I often follow them with cream of tarter for several days or weeks. In cases of congestive fever where the spleen is enlarged, there will be no serious congestion of the liver or brain, but great congestion of the stomach and in the mesentery is evinced by continual vomitings, retching and diarrhœa, even almost like cholera. There will be great pallor of the surface, and the skin will assume its peculiar shrunken appearance, called cutis anserina. These cases require stimulants of the most active kind—brandy, ammonia, sinapisms, with an opiate. But they will not bear much mercury without producing ptyalism, and it is not so neccessary to a cure; but a moderate dose at first I have found generally necessary or beneficial. Our main reliance is upon quinine. It is in all cases a *sine qua non.* Where there is no enlargement of the spleen, the liver or brain is sure to be seriously affected, and then mercury is our *sheet anchor*, and it must not be spared until you overcome the congestion, or affect the system with it. In these cases I give also the *sulphate of quinine*, for that seems to be the most efficient in all cases where the liver or brain is effected.

The best time to reduce an enlarged spleen in the bottom lands is in the fall, after frost, and by continuing your treatment through winter you can perfect a cure; at any other time relapses are sure to come, unless the patient is very prudent, and often no prudence will avail. Then the patient must leave the bottom lands, or take medicine all the time until the habit is broken up, and the spleen becomes quiet as it were. I find irritation with Croton oil and sweet oil, xx. drops of Croton to the ounce of sweet oil, rubbed over the region of the spleen, or tartor emetic ointment, to answer a good purpose, where the patient is unwilling to blister. But I would never rely on iodine, as I said before for I have found it inefficient. This seems strange, from its known and undoubted good effects in bronchocele and in enlargement of the lymphatic glands; but we must remember that the lymphatics are, as it were, destroyed, and therefore cannot act. The red globules must be increased, and also the fibrin, hence the good preparations of iron do in these cases. Unless the blood is enriched by iron, or some tonic, quinine will not stop a long-standing case of chills- It will always stop or check them for a while, but they will return. Port wine is an excellent tonic in these cases. Gin is even better where there is a tendency to dropsy. The Russian belt worn tightly around the body is good in all cases of enlarged spleen, whether it is from hydatids or fever, and where the spleen is dislocated, or the patient is dropsical. Any belt made of leather or cloth will answer, but the Morocco belt made wide is the best. It should be worn tight, and kept so until the spleen is reduced. I have often cured cases by the following pill, which will be more readily taken by your patient than almost any other combination:

Sulphate of quinine, grs. xx.
Citrate of quinine and iron, drachm ss.
Extract of gentian, grs. x.
Hyoscyamus, grs. xii.

Make into twelve pills: give one every hour until six are taken. This pill, with an occasional dose of the calomel or blue-mass pill mentioned before, will cure any case of enlarged spleen or chills, if persevered in a sufficient length of time.

A Case of Extrophy of the Bladder.

BY C. H. M'GILL, M. D., GALVESTON, TEXAS.

The subject of this truly distressing malformation, came under my observation, when on duty, as Examining Surgeon of Conscripts, C. S. Army, in the City of Houston, during the summer of 1863.

The history of his case is substancially as follows :—Was born in Texas, age 27, height 5 feet 5 inches, eyes and hair black, small frame, constitution delicate.

His intellect is rather below mediocrity. Resides with his friends a short distance from the City (Houston;) leads a very quiet inactive life, exercise of any kind, particularly walking, is attended with pain, the pressure and friction of his pants, &c., irritates and causes the tumor to blead. He is therefore compelled to protect the parts by pads of soft cloth, for the double purpose of protecting the tumor, and at the same time absorbing the constantly exuding urine. This constant dribbling of urine is, perhaps, the most distressing, and anoying feature of his case, requiring his constant time and attention, changing the cloths, cleansing the parts to prevent excoriations from the constant contact of urine with the adjacent integuments ; nothwithstanding all this, his presence is very offensive. The bladder is situated in the median line just above the symphasis pubis, where it forms an irregularly round convex tumor, about four inches in length, by three and a half inches in breath. The tumor is soft, and elastic, of a bright red appearance, is exceedingly sensative and bleads readily, when the least irritation is inflicted upon it, the size of the tumor is greatly influence by the position of the patient, being much greater in the erect, than in the horazontal position.

The tumor presents throughout its entire extent a fungoid appearance, and is also traversed with fissures, varying from one-eighth to one-fourth of an inch in debth.

The urine seemed to exude from the entire surface of the tumor, more, however from these numerous fissures.

I searched in vain for the mouths of the ureters. They were not to be found.

The penis was but a mear imperfect, incomplete organ, about one and a half inches in length, and from being compressed between the tumor above, and the scrotum below, presented a broad flattened appearance. The penis was imperforate. The glands penis was wanting. It presented the appearance of being *cut off*.

The scrotum and testicles of the ordinary size, and were, in every respect, sound and healthy.

There is no trace of the umbilicus. The old grand-mother who accompanied him, and was present at the examination, attributed the malformation to the mal-practice of the officiating midwife, in dressing the umbilicus. She assured me that at his birth he was perfect in this particular. Fortunately, he has no sectional apetite as he assured me he never knew what it was to want a woman.

This struck me as rather a remarkable coincidence, in view of the perfect developement of the testicles, and so far as I was capable of judging, the spermatics vessels and ducts were also sound.

The accompanying picture taken at this time will give you a very correct idea of the appearance of his case.—[Could not get engraved.]

So far as I am advised—no plan has yet been devised for the successful (or even palliative) treatment of this terrible affliction.

141 McDougal-street, New York,
March 17, 1866.

Dr. Greensville Dowell, *Galveston, Texas*—

Dear Sir: I have received your favor of the 5th inst., and also the two copies of your Journal referred to. It will give me pleasure to aid you as far as I can in all the matters mentioned in your letter, as I have leisure and opportunity; and to assist our professional brethren of Texas, who, in their fine field of labor, are subjected to so many hindrances and privations. Your beginning with the publication of the Code of Ethics is evidence of your intention to place the profession upon high vantage ground, and I trust you will be sustained in it. Medical men in the South need encouragement and assistance; but it is not to be expected that the physicians in the North will manifest much interest in the success of medical schools, while they consider their own as having peculiar claims upon the confidence of students; and the peculiarities of southern disease and practice can be hardly appreciated here, where the graver forms of fever are scarcely known.

I shall send you a copy of my Lectures on Fever, which, in accordance with repeated promises to my pupils in Memphis, I have finally published; and also copies of some articles which I have published with a view to invite attention to the use of Chloroform, internally, in congestive diseases. I am slow to suggest important innovations in practice; but a long experience in the use of this remedy convinces me of its importance, and it would be a dereliction of duty to neglect its proper advocacy. I commit the subject to your personal attention. You will find that Chloroform, in hypnotic doses, is a remedy for chill and cognate affections; and that febrile re-action may be promoted by it, with little risk of a recurrence of the disease. The best illustrations which I have published, perhaps, are those of cases of infantile convulsions from chill and other causes. In some instances relief has been afforded after so long a continuance of the convulsive movement that all hope from other treatment was at an end; and in no case has it failed to affect a cure. The power of the remedy is wonderful. You are called to the suffering patient when all other remedies have failed, and life is well nigh extinct, and you pour into the throat of the little victim, a sufficient quantity of pure Chloroform to secure the closing of the eyelids: the child sleeps for from one to three hours, with constantly improving pulse and respiration, and awakens restored to health! Need I say more?

Of course I am aware of the use that has been made of Chloroform internally, but I am not aware that any one has proved its power over congestion as I have done; a power which places it in advance of all other remedies, and gives us promise of a great revolution in practice. We may almost dare to hope that, with such a remedy for congestion, fever will cease to be a fatal disease.

With my best wishes for your success,

Yours, very truly,

A. P. MERRILL.

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MEDICAL ITEMS.

It will be seen, from our exchange list, that we have quite a number of Medical Journals in the South, that have sprung up since the war, or have been revived. We have received a pamphlet from Prof. Stowrer, of Boston, of the removal of a Tumour by abdominal section; including the uterus, ovaries, and ligaments. This is also published in the American Journal of Medical Sciences for June. I am proud to know that such an operation could be performed, the patient able to sit up in a month. It is astonishing what a change in surgery the Ecrooaseur, Silver Ligatures and Chloroform has made in the last twenty years. The Ecrooaseur presents hæmorrhage; the silver wire does not cause suppuration, and Chloroform relieves pain, and removes from patients all fear of a serious operation. We publish in this No. the advertisement of Parker's Artificial Limbs. They are used all over the world, and comes as near as possible of giving life to a dead body.

These limbs are made of willow wood, with steel springs, and cords to imitate the natural muscles and tendons. Dr. Parker uses one himself, and has them made to order, as per advertisement. We will order these Legs, or any books, for persons in the country, upon the reception of cost price. I have received a lot of Books from Mr. H. C. Lea, of Philadelphia, at reasonable prices; and we will furnish to any one his books at cost price, who pays us in advance.

The Galveston Medical College has received a handsome present of Books and Engraved Plates from Dr. ——— Saulter, of Boston, for which he has our sincere thanks.

Diseases affecting the System.

TREATMENT OF ZYMOTIC DISEASES BY THE ALKALINE SULPHITES.

BY DR. D.'RICCI, DUBLIN.

[The arrest of zymotic diseases is at the present moment a most interesting question. How many diseases which attack us are owing to some mysterious fermentation of poisonous materials in the blood we are ignorant of! but we suspect that this is a more fertile source of disease than we have hitherto supposed. If we could stay all forms of catalytic action in the system, we might arrest some of our most fatal diseases. We therefore direct particular attention to the two following papers by Dr. De 'Ricci and D. Purdon.]

That sulphurous acid had the power of checking fermentation, was a chemical fact that had been known for many years, and in wine-making countries had from time immemorial been employed to stop vinous fermentation when it had reached the required point; but that sulphurous acid possessed the power of stopping other catalytic action besides vinous fermentation, was not so well known, and the great fact that the alkaline and earthy sulphites possessed, in common with the acid, this same important quality was altogether unknown, until discovered and proved by Professor Polli, of Milan, to whom the entire merit of the discovery is due. When the humoral theory of disease was in a way revived, and when the truth of a zymotic or catalytic origin of many diseases was all but universally admitted, I presume it occurred to many others besides Professor Polli and myself, that if a substance could be discovered which could neutralize the zymotic principle—the ferment—without, at the same time, being injurious to life, a remedy would have been discovered for all zymotic diseases; and as this class comprehends almost, if not all, the most fatal diseases to which man is liable, the value of such a discovery would have been incalculable. I believe, that in the alkaline sulphites we possess such a remedy, and to my friend Professor Polli is due the whole merit of the discovery. How the idea of employing sulphites instead of sulphurous acid, which cannot be administered, never occurred previously cannot be well explained, although Claude Bernard's assertion that it was impossible to neutralize zymotic principles in the living frame without at the same time destroying its vitality, may have contributed somewhat to deter physiologists from trying experiments in that direction.*

Zymotic diseases are supposed to arise and to be propagated by a specific poison, which has the property of re-producing itself. A striking example of a zymotic disease we possess in small-pox; if a fraction of a drop of variolous infection is introduced into the circulation of an individual not proof against such infection, that fraction of a drop will in the course of a few days multiply itself millions of times. This increase is supposed to be the result of an action resembling fermentation; and though this fermentation be somewhat different from that which operates in a brewer's vat, it is yet very analogous to it, and, as it turns out, is subject in many instances to the same laws. It had been known for centuries that fermentation cannot continue in the presence of sulphurous acid; but it is a discovery of the last few years that the sulphites possess the same properties as the acid itself, and this fact has been established in many ways. Two animals of equal kind, size, and condition, were fed alike for a few days, with the exception that to *one* of them was administered a certain amount of sulphite, until the urine passed off gave evident proof of the presence of the salt in the circulation. Both animals were then killed and exposed to the same conditions of heat, moisture, &c. &c. It being summer when these experiments were carried out, and the weather being warm, putrefactive fermentation soon set in, but only in the animal to whom no sulphites had been administered; the *sulphurized* animal (if I may be permitted to coin a new name), on the contrary, still remaining fresh for many days after the other one had long passed into an advanced stage of decomposition. Other animals, after having been saturated with sulphites, were killed, and every portion of their body, solids and fluids, gave, on examination, unquestionable proofs of the presence of the sulphites employed. These experiments seemed to prove that when the sulphites, whether alkaline or earthy matters not, are introduced into the stomach of the living

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*Claude Bernard says, "Fermentation may arise in the blood, and give rise to poisonous principles, which may, in their turn, produce certain grave accidents in the living frame. * * * We cannot neutralize these ferments in the living organism—*it is impossible;* because to effect such a purpose, it would be necessary to interfere with the character of the blood to such a degree that it would no longer be capable of sustaining life."

animal, they may be absorbed and circulated *as such* throughout the organism. This fact now established, the following deduction was unavoidable—that as no fermentation can take place in the presence of a sulphite, and as sulphites can be administered with impunity to living animals, and are absorbed *as sulphites* into the circulation, in a disease depending on a fermenting or zymotic action, we could arrest such action by saturating the system with one of these sulphites. Thus far this matter had been reasoned out well and satisfactorily, but facts were required to establish it, and to obtain these the following experiments were instituted :—Two dogs of same size and weight, and in good health, were fed perfectly alike for four or five days, excepting that to one was administered daily a certain quantity of bi-sulphite of soda. Having been thus prepared, some very fetid pus (about one drachm) obtained from an ill-conditioned abscess was then injected with great care into the femoral veins of each dog, and the results watched; immediately after the operation both dogs seemed stupefied; they laid down, refused all food, and remained prostrated for twenty-four hours. Both, however, seemed a good deal better on the following day, when a fresh injection of the same pus and to the same amount was again practised, both dogs being still fed alike, with the exception of the one to whom the bi-sulphite of soda still continued to be administered in full doses. The effect of the second injection was most interesting. Both dogs were affected alike; both were seized with stupor; in both the pulse was rapid and feeble, while the respiration was greatly accelerated. Both dogs refused their food; both lay down in a state of stupor, and when made to rise and walk, tottered and reeled across the room. One dog, however, continued to receive daily a certain amount of sulphite of soda, and in four days was so far recovered as to be able to eat again his food with relish, while the wound in his femoral vein was healing rapidly. The other dog fared differently; he was fed equally, but he got no sulphites either before or after the operation, and the result was that he daily become worse; the wound in the thigh became gangrenous; the limb swelled up, and ten days after the second injection, the dog died with all the symptoms of typhus, the other dog being about and well. Upwards of three hundred dogs have been experimented on by Professor Polli and myself in this manner. We have varied the infecting substances by employing pus of different kinds—sanious matter, from ill-conditioned phagedenic and sloughing sores; we have employed defibrinated blood that had purposely been exposed for months to the air and become putrid; we have employed the discharge from the nares of glandered horses—and we have always obtained the same result. I do not mean by this to assert that in every case the sulphurized animal has recovered, while the other has perished; but in the great majority of cases those animals to whom the sulphites had been freely and largely administered did well, while the corresponding animal in almost every experiment perished. These are facts which any one can try for himself; and now, what has been the result of these facts when applied to the treatment of diseases in the human subject? Just one year ago I published the details of a most interesting case of septicæmia treated solely and entirely with bisulphate of soda, where death seemed to be imminent and the patient given over, and where the infection had clearly resulted from repeatedy kissing, for several days in succession, the dead body of a beloved friend far advanced in a state of decomposition. My friend Dr. B. M'Dowall, Professor of Anatomy in our University, has, on several occasions, tested the value of these sulphites in the treatment of scarlatina and small-pox, and always with satisfactory results.

My friend Dr. William Waters, of Carbury, treats all his cases of scarlatina with bisulphate of soda or magnesia, and not only administers it during the disease, but also as a prophylactic, with the greatest success, and last year fully established the safety of the remedy by administering it as a prophylactic to an infant three months old. Scarlatina, of a very malignant type, had broken out in the family of a gentleman in his neighborhood; the eldest boy died of it in three days. Dr. Waters administered the sulphites to all the inmates of the house, including the infant. Some of the family escaped the disease altogether, and those who did take it, had it in the mildest possible form. The first case in which Dr. M'Dowall tried this remedy was a most unfair one, it might be thought, but fortunately it turned out successfully. It was a case of confluent small-pox, which, from collateral symptoms, seemed to offer little if any hope of recovery; it was a case, in fact, in which nothing could be done, according to previous ideas. Sulphite of soda was prescribed in scruple doses every third hour, and to the surprise of the Doctor and the whole class, the patient not only recovered, but recovered without a scar. Dr. Cummins, of Cork, has published in the "Dublin Quarterly Journal," vol. 77, a very interesting paper on the treatment of scarlatina by alkaline sulphites, which he employed also as a prophylactic, and always with decided success.

I might add a great deal more, and cite cases of the most rebellious fevers treated at Tunis and other parts of the northern coast of Africa; fevers which, for intensity and malignancy, were scarcely, if at all, inferior to the Egyptian plague. These fevers have all been treated with bisulphate of soda and magnesia, and the success has been so great, the recoveries so marked, that the present sovereign of Tunis has publicly recognized Professor Polli's discovery by a handsome present and the decoration of an order of merit.

I might tell of the great success which has attended the local application of the sulphites in solution to putrid and phagedenic ulcerations, but shall content myself with quoting a short but most important letter which I received last spring from Dr. J. H. Purdon, of Belfast:—"Though personally a stranger, I cannot refrain from doing that which I am sure will give you pleasure, viz., informing you of the success of a remedy you have introduced to our notice, the bisulphite of soda. The cases in which it has been tried by us have all been puerperal, and in all, so far as I have been able to ascertain, it has proved successful. The first case I tried it in was with a primipara. The labour had been complicated with placenta prævia and consequent hemorrhage. On the third day she had rigors, which were quickly followed by rapid pulse, great prostration, profuse perspiration, fœtid diarrhœa, and facies hippocratica. Opium and mercury were freely tried, when, finding after five days that the patient was gradually sinking, I determined, in consultation with my brother whose patient she was, to administer the bisulphite of soda in scruple doses every four hours. From the third dose there was progressive amendment, all the bad symptoms subsiding. After a few more doses the lochia returned, and in a fortnight she was perfectly convalescent. The next case in which this remedy was tried was also a lady, but under the care of another physician justly in extensive practice. It had been a 'face to pubis' case, very tedious, and finally requiring the aid of forceps. On tho the third day symptoms of uterine disease set in, for which mercury, opium and quinine were freely administered, and the gums became rapidly affected. Notwithstarding all this heroic treatment, matters had reached, by the ninth day, a most alarming height. The patient complained of but little pain, but she was greatly prostrated, and the pulse 140, and very feeble. Bisulphite of soda was administered as in the previous case, together with opium and quinine, first every four hours, and then every six hours. The following morning the pulse was at 130; in the evening of same day it had further come down to 106. The second morning it was at 96; the third morning 86. The bisulphite was persisted in all through, and the case ended in perfect recovery.

"A few weeks after I saw another patient, in whom the usual symptoms of puerperal fever of the typhoid type had set in on the fifth or sixth day. It was determined to lose no time with other remedies, but to administer the bisulphite at once in scruple doses every three hours. The pulse at this time was 140; by the next morning it had fallen to 120, when it steadily declined, and in a short week she was perfectly convalescent. Since these cases, my brother has had two more cases in the same locality as the first, in both of whom symptoms of the same character showed themselves. In both the same remedy was adopted, and in both the same successful result was obtained. I have heard of other successful cases in this neighbourhood amongst my professional friends, but can give you no details. I may add, however, that my brother and I have used it successfully both in anthrax and boils, which latter are very continuous in our jail, and we have found it to succeed admirably in 'putting a stop' to their recurrence."

I now conclude. I think I can safely assert, in the first place, that I have proved this remedy, the bisulphite of soda, to be perfectly *harmless.* It is not—like strichnine, arsenic, iodine, opium, or mercury—an instrument with double edge, cutting equally for good or for evil, according to the skill or the incapacity of the physician. It is perfectly harmless, for I have taken it myself, in *larger doses* than are required for therapeutic purposes, with perfect impunity. The physician, therefore who wishes to try it, can do so freely, without fear of risk. Physiology leads to believe that all zymotic diseases depend on a fermenting or catalytic principal in the blood. Chemistry teaches us that in the presence of sulphurous acid and the sulphites, no catalytic action can take place, and practical experience confirms the teachings of science, by showing us palpably that zymotic diseases, even in their most virulent forms, become completely neutralized by this remedy. Who, then, shall not try it, and bring it to the only test which can decide of its value—clinical experience? I stand at present nearly, if not entirely, alone in these countries as an advocate of this remedy; but if I am not mistaken, the discovery of the use of the alkaline sulphites in the treatment of zymotic diseases will one day rank with the greatest discoveries in medicine.—*Glasgow Medical Journal, Oct.* 1865, *p.* 297.

GALVESTON CITY.

The epidemic of Measles has passed, there being only a few cases at present. There has been so far fourteen cases, so far as I can learn, of Small Pox, and four deaths. Those cases that assume the confluent type are very severe, and as yet I have not learned of but one recovery. All the cases I saw were in old persons, and but one has recovered; she being a Negress, and confined only a few days before it broke out on her. One of the first cases came from New Orleans and two from Havana. From these three cases all the others have originated. There is a general vaccination and re-vaccination in the city, and I presume it will not spread. We have only one case now in the Pest-House of Island City Hospital. She is able to sit up. The health of the city was never better at this season of the year. I believe it would be wise in the City Fathers, to have the lots on which water stands filled up with sand, and generally cleaned up: it certainly would be of great advantage to health, and must protect us from the anticipated Cholera. No owner of lots ought to object, as it would make this property worth much more, and make their residences more comfortable and pleasant. The streets are being generally ditched and well drained and raised; if the lots were filled up the city would become clean, and our citizens would not have much fear of Epidemics.

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MEDICAL TOPOGRAPHY OF GALVESTON.

The City of Galveston is situated on an island of that name, and is at the east end, in latitude 29 deg. 18 min. north, longitude 96 deg. 6 min. west. It was founded in 1836, just thirty years since. The island was occupied by Capt. Lafitte in 1812, and there were a few houses or shanties on the island at that time, near the present Catholic college. There was a ship channel just east of the Island City Hospital. The island on which the city is built is about thirty miles long, and from three-fourths to three miles wide. It is separated from the main land by Galveston Bay. The city is just in front of the mouth of the Trinity River, and the mouth of Buffalo Bayou is just east of the city. The island is formed by deposits from the Brazos, Buffalo Bayou and Trinity River. These give rise to the channel in front of the city, and cause the bar just east of the city. In portions of the island the subsoil is a red clay, evidently a deposite from the Brazos. Where the city is situated it is a dark sandy loam, mixed with sea-shells of every variety known to the Gulf. The surface is covered in many places with pure sand; and the south side has large sand banks that have been thrown up by the waves and the south winds: the north side is shell, sand and mud. The whole is crossed in various places by bayous with oysters in them; and between these, running lengthwise with the island, are springs of fresh water. These sloughs are at times flooded with salt water when there are very high tides, or when the wind has been blowing from the east; and the island has been overflowed by a sudden norther springing up when the bay was full of water, and there was a high tide in Buffalo Bayou and Trinity; the bar leading into the bay not being wide nor deep enough to give free passage to the water from the upper bay and the rivers leading into the bay. At such times, if there is a rise in the Trinity, a great deal of drift wood is thrown upon the island, with bark, chips, brush, weeds, and grass. Again, when the Brazos is high and there is a south breeze, we have much drift driven on the southern side. These two conditions supply much of the wood used in Galveston, and nearly all the wood used down the island, besides rails for pens and fencing. These two counter-currents no doubt formed the island; and from its past history, I infer that the island is gradually extending both north and south, and the island itself is becoming firmer every day. The subsoil, in many places, is stiff clay, and is not much affected by the tides; and on both sides this extends off to the depth of several fathoms, so gradually that persons bathe on both shores with impunity that cannot swim a lick; and drays and carriages go out on the beach. This is particularly the case on the gulf side. On the bay side the water gets deep much sooner, and in many places there is quick sand and soft flats. The ship landing is just North of the city, and runs one hundred yards from the last street on the north side, about a quarter of a mile, for the length of two miles. No ship of any size can come nearer than one hundred yards of the main land of the island, and must anchor in the channel made just north of the city. The present city is spread on a space of two miles east and west, and from the bay side to about three-quarters of a mile south, to within a quarter or half a mile of the sand banks. The city is laid off nearly due east and west, north and south. Broadway runs through the centre, and Bath Avenue nearly north and south. The present city is mostly built east of Bath Avenue; but of the portion east, about one mile and a quarter is settled; and west, about three-fourths, to the present railroad depot and gas works. Just south of Broadway, near the Catholic German church, is a large pond filled with all manner of filth, running up into Broadway, near the street running south of the custom-house and court-house to the beach. This is the commencement of Bayou McKinney, and runs south south-west for several miles, and, when flooded with fresh water, bursts into the Gulf on the south side of the island. This bayou is also connected with a wet, weedy marsh just south of the city, coming out from the bay on the north, and running just south of the grave yard. These bayous furnish many mosquitoes to the west end of the island, and has prevented this portion of the city from settling so fast as the east. South of this bayou is a sandy ridge, where many of our most wealthy citizens now live—this portion of the city having been built up in the last ten years. On Bath Avenue, just east of the convent, is a large fresh water pond that, I believe, never dries up. Just east of Tremont street and north of the Waters' House, is also another fresh water pond that scarcely ever dries up. This is of considerable extent, and completely surrounds the Waters House on the north-east and south. This pond was dried up in 1864, when we had yellow fever here. It is the only time I have seen it dry. These various ponds and bayous are being filled up and built on. Old bone, leather, sand, mud, and old tin are being used; and even the weeds and trash from the city sweepings. The body of these ponds are quick-sand, and cannot be crossed by horse or carriages, unless paved with brick, trash, &c. There are many senna bushes* growing in the streets and on the sides of these ponds. These are very offensive and cause a sickening sensation, and give protection to thousands of mosquitoes.

There are many beautiful flower-yards and shade trees. The cottonwood grows the best and largest. But we have the black locust, the honey locust, and the china tree. Magnolia grows well when planted, and also the pine. Spanish cedar seems to be a favorite, as it is planted around the fences, near these wet places. We have every variety of flowers and shrubs, and the various kinds appear to grow well. Oranges, lemons, bananas, figs, guavas, grow well: but bananas and guavas are too delicate, and are killed down every few years. They were all killed in the winter of 1863–4. Every manner of vegetable grows well, especially melons and potatoes, both sweet and Irish; and they are as easily cultivated as any where else in the world. The mid-summer is too hot and dry for them to do well; but the winter, spring and fall vegetables are usually abundant and cheap. There are no large trees of natural growth; but in various places we have the mezquite and wesochee. Dew-berries and black-berries grow wild; also, the wild cranberry. So much for the locality, soil and productions of the city and the island.

METEOROLOGY.

From the various records I can procure, I give a table of the medium temperature &c., which I have carefully compiled up to the 1st of Jan.,

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*Senna Molindica—Senna Lincifolist.

1866, since which time I have kept a register at the hospital, which I will, in future, report for future reference. It will be seen by this table, that the city is subject to extreme and sudden changes, though the thermometer never goes very low or very high; but it often makes changes of 40 deg. in twenty-four hours. The wind is equally changeable—from a calm to a blow, almost a storm Some months we have six inches rain, and others scarcely a line. The wettest months, September and March—the driest, October and May. During the summer months, we have usually a stiff south breeze from 10 A. M. to 4 A. M. the following night. We have heavy dews when the breeze calms, and it is not cloudy. The number of cloudy days are as observed to clear.

THE PEOPLE AND HOUSES.

Galveston is a perfect Bable. About one-fourth of the inhabitants are Americans and English; another fourth is German; one-sixth French, and one-sixth Spanish; one-third all other nations, and one-fourth negroes—now Freedmen. The houses are mostly of wood, especially the dwelling-houses, and of one and two stories. They are not closely built up, there being not more than four houses on one-half block, and often only one. The streets are wide, being eighty feet, with an alley running through the blocks, east and west. The style of architecture is as varied as the nationality. The habits and customs are also varied as the countries from which they come. The American eats pork and beef, and drinks whiskey brandy and gin. The Germans eat beef, pork, cabbage, or sour-crout; and drink Rhine wine and lager beer. The Irish and English eat beef, pork, peas, Irish Potatoes, and drink any thing, but principally whiskey, porter and ale; French, sausages, fish, eggs, milk, cheese, beef, and drink French wine and lager. The negroes eat anything, and drink anything. All classes use tobacco. The Americans principally chew; the Germans smoke pipes; French and Spanish, segars; negroes use everything. All dress alike, and according to their purse. Germans sleep on and cover with feathers; Americans, matresses, and cover with blankets; French, matresses, and cover with quilts and comforts; negroes sleep on cots, and cover with quilts, blankets, and anything. All live in houses according to the rent they have to pay, and their ability to pay. The Irish are the most gregarious, and live in the cheapest houses, except the negroes, who are now living in crowded huts that white people will not live in.

THE STREETS, ALLEYS AND YARDS.

Many of the streets are filled with water from week to week—but few have much or deep mud. The alleys are worse than the streets, and are the receptacles of all the filth of the house, kitchen, yard, and even often the *cloacæ*. It is impossible to walk through any distance without getting your nose charged with effluvia, and often your feet filled with fœcal matter of horses, cows, goats, hogs, dogs, and *dejecta hominis*. Often dead cats, dogs, hogs, and goats, lie for days and weeks, with rats, mice, and old bones, fish and fowls. The yards of many of our citizens are as bad as our alleys; and I really do not believe there is a city in the world that is more neglected than ours in this respect.

CISTERNS AND WELLS.

All classes use cistern water—principally brick cisterns about six feet deep, covered with wood. The wells are brackish, and cannot be used for drinking. It is used in scouring, and sometimes, when cistern water is scarce, for cooking. The horses are usually watered from the cisterns in the centre of the streets; but they are not so healthy, nor do they thrive so well as those who have csitern water.

DISEASES.

Galveston has no local endemic diseases, but is subject to epidemics of yellow fever and dengue, which are southern epidemics. It is also supject to epidemics of rubeolo, variola, and influenza. Cholera has never been epidemic, and perhaps never will be, as the citizens are compelled to use rain water, and the porous character of the soil takes up all filth in a short time. It can never be subject to intermittent fevers, for the same reasons. Typhoid fever will always prevail from the small rooms and the constant influx of emigrants. Phthisis pulmonalis is unusual, unless imported. Pleurisy and pneumonia are common, and will continue until we have closer houses and better built up streets. Rheumatisms and neuralgia will always be common, from the sudden changes and their extreme range. Catarrhal and bronchial affections are common, and will probably remain, as our changes are so sudden. Ophtalmias are common, and will doubtless increase from the bright sun and sparkling water, gas lights, and tin roofs. Cutaneous diseases are prevalent, and we cannot reasonably expect any improvement, from our isolated situation and exposure to salt spray and salt dews, and want of milk diet.

WHAT DISEASES I HAVE SEEN IN GALVESTON.

Since I have been here, four years, I have seen two epidemics of Rubeola: one in 1863—one now prevailing, of Febris Enantemastica (Dengue). One in the summer of 1863 and the other in the summer of 1865. One epidemic of Febris (Icterus) Typhides—Yellow Fever in 1864. I have no recollection of a case of Intermittent Fever occurring on the island that I could not trace to a foreign source. I have seen every year since, cases of Febris Continua without Sudoninæ or Pitichræ. I have seen sporadic cases of Typhoid Fever every month in the year, and every year. I have seen one epidemic of Pertussis in 1864. Sporadic cases of Diarrhœa Hæmorrhœgica (Bloody Flux) all the time. Rheumatisms every month. Neuralgia every month. Tetanus every year, but more frequently in 1863—ten cases. Frequent cases of Hæmoptysis, with apparent complete recovery. I have not seen a case of uncomplicated Dysenteria: Poronychia has been epidemic for the last nine months I have treated over a hundred cases; sometimes as often as seven in one day. I have been at a loss to account for this, unless the hands became much softer during the war, and the hard labor both male and female have been forced to perform since its close: but this is not satisfactory; for I believe that a full proportion have been negroes, who did not undergo any change in respect to the use of their hands; hence, I must look for the change of diet—the return to sugar and coffee, tea and chocolate, and substitution of flour for corn bread. Some one or all of them may have conduced to this result. I can only state the fact, and leave others to discover the cause. I have not thought it worth while to speak of the epidemic of Yellow Fever and its origin, whether local or foreign: I leave these subjects for other reports. I will simply state, so far as I can learn, there has been epidemics in 1836, 1839, 1844–5, 1848–9, 1853–4, 18578–, and 1864: of the latter I have a full report and complete history—having been an actor and sufferer. I have heard of only three epidemics of Dengue—1848, 1863, and 1865: of the two latter, I also have a distinct recollection, having had it in 1863, and practiced through the two epidemics. Cholera has not visited the U. States since 1853, and I have not seen a case in Texas; but learn that it visited Texas in 1853, and prevailed in Columbia, in connection with Yellow Fever—both being epidemic the same year, and at the same time. I have seen cases of Variola every year, but no epidemic. It is now prevailing in the city: I have seen four cases and one death—two distinct and two confluent: one from New Orleans, one from Havana, and two occurring in the city: the two occurring in the city from the case from New New Orleans—three cases Negro women and a white man. I saw three cases of Scarlatina in 1863, three in 1864—one death. I did not hear of any other cases in the city. I believe calculous diseases are very rare in Galveston, and I may say even in the State. I have treated two cases by operation—one a white boy from Houston, and the other a female child from Colorado county. Dr. Lancton brought one case to me in 1863: I believe he was a German. The gravel was in the urethra, and was removed through the urethra with the pocket case scoop. I do not believe calculous diseases will ever originate here, as we are compellad to use rain or condensed water.

Mr. President, *and Fellow-Members of the Society:* I have thus imperfectly discharged the task assigned me, and regret that the data from which I have drawn has been so meagre. I could not give you a complete history, or at least a succinct one, of the past. I hope some of you who have lived here longer and are better able, will make up my deficiencies. Texas being a new country, without a medical society or a medical journal for years, has fallen behind the other States; but I hope we are drawing upon a new era, and we will have more energy and more facilities for the compilation of medical facts. I thank you for your kind attention and forbearance.

CEREBRO-SPINAL MEMGITIS.

We commence with the following translation, from the German of Prof. Eisethman, a series of papers that are equal to any in the medical world. This review of Cerebro-Spinal Memgitis is complex, and takes up the whole ground. It is peculiarly improving to southern physicians who have been cut off from any Medical Literature for five years. This disease is now prevailing in many parts of our State, and is very malignant. I have treated some ten cases in the Island City Hospital in the last six months. They commenced as congestion of the brain, and were treated by me according to the principles laid down in the first number of this Journal (which see): three have died out of the ten. One lived one hundred and seven days, and died from paralysis; one recovered after four months treatment, but is still somewhat lame, and walks with an irregular gait: the others recovered in twenty-five days, and left well in all respects. I believe the cause, in all cases, was exposure to changes of temperature and malaria. All had more or less periodicity in their cases, and treated with x grain doses of Calomel and xii of Quinine, with blisters to nape of neck, &c.

5. CEREBRO-SPINAL-TYPHUS.

Philip Wales.—Notice of the Spotted Fever, as it occurred at Niew Port, Rhode-Island, in the months of January, February, March, April, 1863,—Hays' Americ. Journ. Januar.

Jenks.—Spotted Fever. Buffalao Med. and Surg. Journ. 1863 Octbr.

J. Baxter Upham.—Hospital Notes and Memoranda of the Congestive Fever, or epidemic Cerebro-Spinal-Meningitis, as it occurred in the Winter and Spring of 1862—63, in the camps in and around the Town of Newbern. Boston Med. and Surg. Journ. Auch im Separat-Abdruck Boston 1863. Pp. 38.

Reid.—Spotted Fever. Hays' Americ. Journ. Januar.

Carson.—Spotted Fever. Ibid. p. 206.

Henry Hartshorn.—On the Resemblance of Spotted Fever to certain European Epidemics. Hays' Amer. Journ. of Med. S. July.

Stille.—Case of Cerebro-Spinal-Meningitis called "Spotted Fever". Ibid.

Levick.—Cases of Spotted Fever. Ibid.

Gilbert.—Cerebro-Spinal-Meningitis. Ibid.

T. **Morrill.** - Cerebro-Spinal-Meningitis. Ibid. April.

Dunlap.—Permanganate of Potass in Spotted Fever. Cincinnati Lancet and Observer, June.

Wunderlich.—Ueber einige Falle von epidemischer Cerebro-Spinal-Meningitis in Leipzig. Archiv der Heilkunde Heft 5.

Frentzel.—Ueber eine Epidemie von Meningitis cerebro-spinalis. Berlin. klin. Wochenschr. 21, 22.

Hanuschka.—Einige Worte uber die seit dem 21. November 1863 in Schlesien, im Neissethal beobachtete Meningitis cerebro-spinalis epidemica. Berliner klin. Wochenschr. 25.

Hirsch.—Ueber die epidemie von Meningitis cerebro-spanalis wahrend des Fruhlings 1864 in Bromberg.

In our last yearly number we discussed the Spotted Fever of the Americans, under the heading "Purpura acuta Epidemica;" because at that period the American physicians overlooked the most essential symptoms of the disease, and laid the chief weight upon the petechiæ; but we could not accept the term "spotted fever," because under this name the exanthematic Typhus is understood in Germany.

If we, then, rank this disease with the Typhus, and especially as *cerebro-spinalis*, the whole contents of this report will bear us out. We begin, therefore, our report with the idea of two authors who did not recognize this disease either as "Cerebro-Spinal-Meningitis, or any other sort of Typhus, and yet otherwise contributed to a more thorough knowledge of this disease.

Dr. Wales observed an epidemic of this disease, in the first four months of 1863, at New Port, and commences his elaborate description with a retrospect of the literary history of the same. Whether the epidemics of 1749 in Rhode Island, described by John Bard in Vol. 1, of the Medical and Philosophical Register, and those of 1792 in North Carolina, described by Hugh Williamson in his Medical Repository, Vol. II, belong in this category, we must leave undecided: on the contrary, "Gallup" on Epidemics, 1815, describes, under the name of spotted fever, an epidemic which, in 1806, ravaged Vermont; in the same year, this same disease made its appearance in Medfield, Massachusetts; and with such violence that the Massachusetts Medical Society commissioned a committee consisting of Drs. Welsh, J. Jackson, and John Warren, to examine the pathology or therapeutics of the same; and their report appeared in the 1st volume of the Reports of the Medical Society of Massachusetts. Soon after (1806) this epidemic showed itself in Connecticut; 1810 in the county of Worcester, Massachusetts; in the autumn of 1812, among the troops at Greenbush, and at other military stations; in December, agreeable to the Eclectic Repository, Vol. III, in Camden, opposite Philadelphia, accompanied with great mortality everywhere. The physicians recognized it as the same described by Dr. Strong in the 2d volume of the Communications of the Massachusetts Medical Society, under the title of "Spotted Fever." In February 1818, it appeared in Philadelphia, Frankfort, Abington, Byberry, in Bucks county, and different localities of N. Jersey; furthermore, it re-visited Vermont; various cities and villages of Massachusetts, Maine, and Boston harbor.

But we regret that the historic representation of Dr. H. Wales is very obscure, and we cannot believe that he had before him during his labors, all the pamphlets and periodicals cited. In the winter of 1862 and '63, agreeable to the report of the army surgeons, the disease made its appearance in Portsmouth, Annapolis, Washington—in March in York county; between February and April in Philadelphia, Manneyunk, Norriston, Tranefort, Chester, &c. &c. In Newport (R. I.) there appeared but seven cases The symptoms and the course the same as in epidemics of the latest period, ouly Dr. Wales overlooks the rigidity of the neck.

At the *post mortem* examination made during the epidemics of 1813 and 1816, it was discovered that the brain and its membranes were always hyperæmie, covered with serum or the ventricles under the arachnoides filled with coagulated lymph.

Respecting the Ætiologie, says Dr. H. W., this disease was observed to attack all sexes and all ages from the first to the seventieth year of life The contagiousness of the same, unanimously with his colleagues, he denies in toto.

In the therapeutics, it is said that Dr. Miner speaks of opium as of a specific; in some cases he was obliged to administer, in the course of one hour, a half an ounce of tincture of opium, or a half a drachm, yea, often a whole drachm of opium in substance in the course of twelve hours, until the most violent symptoms were appeased; and all the sick, whose symptoms had been quickly conquered, recovered without exception. Besides wine, brandy and camphor are highly praised. Dr. Hall reports, that he treated a young woman who, after her first confinement, was taken with the Spotted Fever, accompanied at first by a low delerium, which soon changed to a violent one, and ended in coma: he administered within an hour 40 gr. camphor and 180 drops of laudanum, and in the subsequent three hours, 400 drops, one bottle of Madeira and some brandy; immediately thereafter she improved, and gradually recovered.

Dr. Jenks speaks of this sickness occurring and rapidly spreading in the county of La Grange and other parts of North Indiana. He takes the same ground with Dr Wales; gives us the same symptomatology; the same duration; yet he already speaks of the stiffness of the neck and a violent drawing back of the head: he also points out, that the petechiæ were not a necessary symptom, but were wanting in three cases out of ten.

He had a case in which the disease commenced with palsy; a second in which the patient became permanently blind in one eye; a third in which strabismus made its appearance, and a curvature of the vertebral column originated, which lasted several months: at last he discovered that delerium did not always occur, but observed great restlessness and stupor in all cases But of a Cerebro-Spinal-Meningitis, Dr. Jenks does not yet speak.

We now reach the labors of Dr. Baxter Upham, who observed the disease among the troops in camp near the city of Newbern, and views it in a far different manner from the above-named authors. He gives us the same image of the patient as Dr. Wales and Jenks; but adds. that in the commencement of the disease, the nape and vertebral column are very sensitive under pressure: he dwells particularly and with emphasis upon the pain in the cerebellum, spinal column and joints; also upon the tetanus in the neck (with partial opisthotonus) which he pronounces pathognomonic; also the terrible restlessness of the patient. Active delerium he rarely witnessed—more of a perversion of intellect combined with apathy and stupor; exceptionally also a cheerful delerium with talkativeness, priapism, and tokens of an excited sexual impulse. Petechiæ were often seen, (consequently not constant). The epigastric region and the abdomen very sensitive under pressure. Tritis and Synovitis sometimes followed. The common duration of the disease was from three or four to seven days.

Dr Upham reports twenty-two *post mortem* examinations (thirteen by himself, seven by Dr. Cangill, and two by Dr. Jewett) with the following result: upon the convex plane of the brain, in one case, there was no exudation to be found; in the other cases the arachnoidea was dimmed; underneath it, and between the convolutions of the brain, some serum—at times with a few flakes. and only in some rare cases a fibrous exudation. In all cases was the local suffering developed feeblest on this side of the brain. The ventricles contained, in all cases, an abundant serous or sero—purulent exudation. But the source of the disease lay at the base of the brain, at the bases cerebri, at the medulla oblongata, and along a part or the whole of the spinal marrow. Besides other more or less demonstrable symptoms of inflammation, there were found here serous, sero fibrous, sero purulent exudations in different extensions The more or less firm and tenacious fibrous layers surrounded the pons varioli, mostly also the medulla oblongata, and in some cases enclosed the whole vertebral marrow in a sheath. These exudations existed even after the shortest duration of the disease; but the longer the sickness lasted the more of the exudations there were, and the fibrous coverings were the more firm and tenacious; and Dr. Upham speaks of a semi-organization of the same. In the abdominal viscera only passive congestions were discovered.

While Dr. Upham renders his final verdict respecting this disease, he points out firstly: that in all cases the undoubted symptoms of a cerebro-spinalis meningitis were present: secondly, that this was not a common primary inflammation; because all antiphlogistic treatment had no favorable influence upon it. He also demonstrated that it was not a malarial disease, because it made its appearance at a season during which no miasmatic sickness prevailed, and quinine became useless. All taken together, he concludes that this disease is of a very malignant, typhoid nature, and in its chief elements identical with the in England prevailing ship, camp, and prison fevers. But when he speaks of its differing only from the exanthematic typhus by the predominant localization in the brain and spinal marrow, this is contradicted by its short duration, and by the lack of contagion.

Dr. Reid, in Canshohocken (Montgomery county) had, in 1863, in March, ten cases of this disease; none of the patients were above fourteen years; the youngest about sixteen months of age; five were boys and five girls; seven had petechiæ and three had none. In some of these cases there appeared, for a short time, an EXANTHEM. The symptoms were those described above. Seven died; some few of them a few hours after the commencement of the sickness, others after a few weeks. Dr Reid declares, this disease is identical with the one which Dr. Condie, in his work on Diseases of Children, described as Cerebro-Spinal-Meningitis. Dr. Carson, in Norristown in the same county, observed thirty such cases, of which fourteen resulted fatally. The age of the patients ranged from six months to forty-five years. The symptoms the same as above, accompanied by violent and painful vomitings, a sense of weakness with threatening and fatal collapse. He says that Dr. North, already in 1812, minutely described the same disease—[Med. Repos.]

Dr. Hartshorn declares that the so-called spotted fever bears the greatest resemblance with the Meningitis-cerebro-spinal of the French, the Cerebro-Spinal-Typhus of the Germans, and the apoplectic-tetanic-typhus of the Italians.

Dr. Stille says that the falsely so-called spotted fever is naught but an epidemic Cerebro-Spinal-Meningitis of a typhoid type.

Dr. Levick gives us an almost fulminating case, without a trace of inflammation in the brain or in the vertebral marrow.

An eighteen months old girl retired at night in good health. At one o'clock after midnight she awoke with a violent headache; the following morning her skin was covered with petechiæ. Externally she received an application of carbonate of ammonium, a warm bath and turpentine oil; but at 3 o'clock P. M. she was a corpse. At the most careful *post mortem* examanination, had in presence of several other physicians, no trace of Hyperæmia, or of an exudation, could be discovered in the substance of the brain and of the medulla oblongata. The visceræ were covered on the inner and outer coats with *ecchymosœ;* the mesenteric glands enlarged; the solitary glands greatly developed; the agminated glands normal. In the lungs much liquid blood; in the right ventricle of the heart thin blood, which had the appearance of red wine.

Dr. Morrill, of Memphis, reports, that towards the end of the year

1862, Cerebro-Spinal-Meningitis appeared among the negroes which the Federal army brought to that city; which greatly spread in the following winter, and caused great mortality; and in the winter of 1863-64, also prevailed among the blacks. The most remarkable feature is, that in Memphis and vicinity, negroes exclusively, and rarely a white individual; while in other portions of the country it prevailed chiefly among the white population. None of the remedies tried, including opium, seem to have accomplished much; and only from the use of Aconite, which the author had occasion to employ in two cases, he witnessed any favorable result; he gave it every three hours in powerful doses, connected with calomel in purgative doses; also ordered oil, mixed with tincture of aconite to be rubbed on the nape of the neck and along the spine.

Dr. Dunlap, in Springfield, Ohio, reported that the spotted fever, in the commencement of the epidemic, proved mortal in all cases, until the idea struck him to use the Potassæ per manganas; under which treatment nearly all his patients recovered. He gave it in oft-repeated doses in $\frac{1}{8}$ to $\frac{1}{2}$ grain solutions; and if the convalescent period was excessively long, he added quinine and iron.

To conclude our remarks upon the American treatment, we must communicate the following:

Drs. Levick, Gilbert and Adler speak highly of quinine; they demonstrate, by instances quoted, that the latter, if given in large doses, produced a rapid and decided effect; which was the more evident because no sooner was that remedy dropped, than the patients had a relapse; but improved remarkably so soon as its use was resumed. They demonstrated that patients, who had been abandoned as lost, recovered by the continued use of quinine.

Prof. Wunderlich observed in the hospital and in the city. nine cases of Cerebro-Spinal-Typhus from the 23d of April to the 18th June, 1864 His observations differ materially from those of the Americans, and partially from those of the French. In all cases the neck was stiff, the head bent back, and dissection displayed the well-known inflammatory condition of the bases of the brain and the spinal marrow. But the disease, in most instances, did not commence with chills, the temperature was raised from 72 to 74 deg., Fahr., but without regular change, and a slight fever was at all times noticeable. Petechia were lacking. The disease made many fluctuations between convalescence and relapse and a decided improvement commenced only in the third or fourth week, and sometimes later. In a few cases there appeared the symptomatic herpes upon the upper lip, which is not usually present in the typhoid diseases. Sometimes severe colds were assigned as the cause of the disease.

While in France and America bleeding in the most favorable cases availed nothing, and in many cases only aggravated the symptoms, in Germany four patients recovered out of nine (three in the hospital and one in private practice) who were repeatedly topically bled; while the remaining five died, who were not bled, owing to the violence and desperate state of the disease. The symptoms were, aside from tetanus and sensibility in the neck, of a manifold character. Page has already fifty years since, subdivided this disease into four classes, according to the prevailing symptoms:

1. One with predominant cerebral symptoms.

2. A pseudo-pneumonia with pains in the breast, oppression and cough, with a sticky or dirty-brown expectoratoration.

3 An enteric, in which the stomach and intestines suffered, and colics or choleric phenomena were present.

4. One with violent pains in the joints, which were painful, cold and dumb.

Prof. Towides, in Strasburg, has, in more modern days, distinguished similar forms, and he follows Dr. Wunderlich, who noticed, among his comparatively few cases, all forms. He subdivides—a comotose, delerious, paralytic, a cephalalgic, a polyalgic, and a convulsive form.

We must mention a case which Dr. Wiedmer communicated to Dr. Wunderlich, in which the usual symptoms predominated, and in which, after six days, convalescence commenced; but the six years old patient, who could move about very well in bed, could neither sit nor stand. Later, the motive-power improved; but no sooner did he close his eyes, than he commenced vibrating an i lost his balance. [Here there appears to have remained ataxia of motion, which probably was afterwards cured.]

Dr. W. remarks about the symptoms, that in these cases, as in general in all infectious diseases, the anatomical changes did not harmonize with the functionary disorders. Palsy of the extremities was observed in but one instance, although there was no doubt about the diseased state of the spinal region of the meningina—not even in the mortal cases which followed the pains in the vertebræ and in the loins; and in one mortal case without palsy, a highly intense exudation was found to extend down to the cauda equina. On the contrary, in two cases the cerebral symptoms were lacking, in which hardly an integrity of cephalagic meningina could be accepted.

Topical bleeding, which was repeated according to circumstances, brought evident relief, and appeared to have had a great share in the cure of the four patients, in whose cases it was applied. Iodide of potassium to the amount of ½ drachm a day, was followed by a decided improvement; ice poultices to the scalp appeared to allay the pains in the head. The iodide of potassium was used by Dr. W. only after the fever and the pains were lowered; and was discontinued upon an exacerbation of the fever, in order to return to it afterwards. Its curative properties were not to be denied. Inhalations of chloroform, used in a very bad case, led to a speedy recovery. Morphine, which was ordered in very small doses (1-6 to ¼ of a grain) to allay excessive pains, gave only temporary relief.

Prof. Hirsh, in Berlin, reports respecting the epidemic in Bromberg, founded upon a written communication of Dr. Solomon, of that place. This epidemic which, outside of Bromberg, spread among the surrounding villages, commenced in the first days of February, 1864, and terminated in the first half of June. No trace of contagion. There occurred one hundred and forty-one cases, among which one hundred and thirty-two in children under fourteen years, and between the second and seventh years. The constant and characteristic symptoms were vomiting, head-ache, and the neck bent backward; which suddenly occurred, generally without chills or any other premonitory symptoms.

Drs. Hirsh and Solomon distinguish two forms of the disease, namely: the one with muscular action and the other paralytic, without any sharp, distinguishing demarkation between them, and one often merging into the other. In the paralytic form, a short drowsiness was followed by vomiting portions of food, followed by portions of serum, which either ceased soon or recurred frequently; body and extremities cold; the countenance livid, cyanotic; the pulse at times frequent, and again intermitting, feeble and imperceptible; pupils immovable, the neck bent back violently, with pains in the cerebrum and cerebellum. The attempt to straighten the neck, yea, even a slight touch of any part of the body, caused the most violent pains, and aroused the patients from their lethargy only soon to return to that state. Thirst not great. In some cases the tongue and throat covered with a diptheric coating; at times the parotids much swelled; the body costive; and death followed in three, four, six or twelve hours; or in two to four days. At dissection, after an early death, there was discovered dimness and toughness of the arachnoidea, between pons and chiasma, beyond the corpora mamillaria and the tuber cinereum; the substance of the brain very much swollen, so as to cause a disappearance of the sulci; in it no congestion of blood; the cortical substance very much developed, especially in the front and hinder lobes. Nothing abnormal in the cavities of the brain; in the ventricles of the side, barely a thimbleful of serum; in the subarachnoideal texture, no œdema; the medulla oblongata somewhat tougher than common. In cases where death occurred only in from two to four days, there was found more or less serous exudation, particularly about the pons and medulla oblongata. The form with muscular action differed from the paralytic by a higher temperature, a somewhat fuller pulse, and the protracted duration of the disease. With not a few of the patients, there appeared, after the vomiting, temporary convulsions; but rarely did death occur during them. The heat did not reach the height of other febrile diseases; the same may be said of the pulse, which in frequency often varied. Only in a few cases burning heat in the abdomen and corresponding pulse were observed. More frequent was the appearance of herpes labialis, upon the appearance of which an improvement or rapid convalescence followed. Petechia never occurred, and in but one case, vibices. The delerium was rarely violent—mostly low muttering; but became violent upon any attempt to unbend the neck or move the patient. After two, three, four or five days, the patient fell into a sleep which lasted for hours, and out of which they awoke lively, covered with sweat, and urinating a great deal; calling for food, and conversing rationally: but in the course of a few hours or days, a new attack occurred, with pains in the cerebrum and neck, the latter contracted. In general the authors note a tendency to relapses in this epidemic. Many children awoke from their slumber with a total deafness, which lasted several weeks or months, and in some cases remained so permanently. In the practice of one physician who, on the whole, had thirty-nine cases of this disease to treat, this deafness occurred eight times; and in five of these eight cases, hearing was restored between five to seven weeks. Several children became blind in one eye—a few in both eyes. The subconjunctive tissue became strongly injected; the iris inflamed; the whole region of the pupils filled with pus; the inflammation spread from the iris upon the Choroidea, and the retina peeled off. Energetic atropinisation, even if applied early, could not enlarge the pupil, which rapidly became pasted over. This exudation in the pupil could be reduced by absorption, but therewith nothing was gained: sublimate, and latterly, iodide of potassium could not restore the eye. No particular treatment proved especially curative; many children recovered under the most varying treatment. In the cases with muscular action, topical bleedings with large doses of calomel were prescribed. Cold applications to the head were, in all cases, most obviously and exceedingly useful; they quieted the patient, and were clamorously demanded by the sick themselves.

Professor Hamishke, President of the Board of Health in Ottmachan, renders written reports respecting the epidemical cerebro-spinal-meningitis, which, in the winter of 1863–64, raged in the valley of the Neiss river in Silesia. From the autumn of 1862 to the autumn of 1863, the prevalence of many remarkable cases of catarrhic disease of the mucous membrane of the duodenum and the billiary ducts were observed. In the commencement of autumn there appeared a violent epidemic in the form of measles, which attacked two-thirds of the children. This was followed by algia of the trigermini, of the ischiaticus and of the cruralis; and simultaneously in the latter part of autumn, many persons complained of headache, a sensation of tetanus in the neck, pain in the small of the back, and a feeling of oppressive languor and weariness in the joints, without becoming confined to their beds. On the 21st November he had the first case of a complete cerebro-spinal-meningitis, which attacked a robust young man, and killed him in five days. To the end of April he treated twenty-four such patients; but we would deceive ourselves greatly if, from these, we should judge of the extent of the epidemic; for already, in the commencement of January, the news spread, that many young persons and children, without a previous trace of sickness, were suddenly attacked with headache, vomiting, and convulsions; which ended in death in the course of a few hours. Such sudden deaths, and in general such a disease must have occurred frequently during the winter of 1863–64, which were not brought to the knowledge of the medical practitioners; for the author speaks of one (not very large) village, in which thirty children died of this disease. The spread and mortality of the epidemic could not be determined, because the peasants of that region rarely ever called a physician, and the rendering of a coroner's certificate for burial is an unknown matter, and not required by law. The symptoms were the same with those observed in France. With some there appeared already, in the first days, an exanthem of a measle kind upon the joints and the trunk. The mucous membrane of the mouth and throat was always pale. No irritation to coughing. It is rather remarkable that there is no mention of a disturbance of consciousness.

When the disease approached convalescence, which did not occur until the ninth day, then the symptoms vanished in the same order in which they made their appearance. After the disappearance of the stiffness of the neck, the convulsions and the pains in the joints continued for a long time, and the head-ache returned, weeks after convalescence, repeatedly and in some cases had a decided typhoid character; in which case quinine proved very beneficial. Death ensued under increased difficulty in breathing. The duration of sickness in favorable cases is not stated: convalescence was a very long duration, to which topical bleedings may have contributed, as the author himself confesses. In unfavorable cases, death ensued in a few hours after the commencement of the disease, with convulsions. Of the twenty-four patients of the author, three died before the prescribed remedies could be applied; three died after a duration of twenty-four hours; three lingered for several days; and in one case, after a confinement to bed for several weeks. And herewith is also the prognosis indicated, as of twenty-four patients, ten died. Dr. Frentzel commences his lecture, delivered before the Medical Society of Berlin, with the following communication: Since February, there were attacked in the 2d regiment of the guard, and in the regiment "Alexander," fourteen men by cerebro-spinal-meningitis. Simultaneously this disease was observed in other regiments, and among the citizens: in the hospital four cases, and in the charity hospital of Prof. Traube one case. Also in Stettin and Bromberg this same disease made its appearance. Of the fourteen patients which Dr. Frentzel treated, seven were cured, two are convalescent, and five died—a result very favorable, if compared with other epidemics. In all cases there appeared upon the breast and abdomen, a Roseola—exanthem: in the height of the disease, albumen rarely ever lacked in the urine; the fever was low, and the temperature of the body very moderate; it remained always under 39 deg. Cent. (the disease never bore a very acute character.) In the convalescence, which was very slow, even where the disease lasted but fourteen days, the pupils of the eye remained for a long time enlarged. The author remarks, that the constant recurring reseolæ and delerium gave the disease such a resemblance with typhus, that he as well as other physicians came to a sure diagnosis, only after the appearance of tetanus and pains in the neck Yet in spite of this, and in spite of the by-him-adopted contagiousness of this disease, he avoided to enumerate them among the typhoid diseases. His prescriptions were ice-and-cold-water applications to the head; topical bleedings by cups in the neck and along the spine; leeches behind the ears; the rubbing in of mercurial salve in the neck, spine, thigh, breast, and belly, even to salivation; internally 2 grain doses of calomel every two hours, and castor oil, until the bowels were moved; oft-repeated clysters, and admission of fresh air by ventilation... In the convalescent he maintained, for a long time, a supperating wound and normal excretions.

Prof Hirsh, the author of the Historic-Geographie-Pathologie, gives a history of this disease, which cannot be found as complete in any other work; and though this may not explain the ætiology of the same, yet it guards against erroneous theories.

The first authentic news respecting this disease date, agreeable to Dr. Hirsh, in the year 1837; in which year, this disease, for the first time, appeared in an important form. Yet, already in 1805, there prevailed an epidemic in Geneva, whose symptoms resembled cerebro-spinal-meningitis. Unfortunately the anatomic examinations lack. There also prevailed an epidemic in 1811, in Greenoble, which presented the same symptoms, and attacked (like many later epidemics of meningitis-cerebro-spinalis in France) soldiers only.

Finally there prevailed in 1832, in the city of Vesoul, an epidemic among the citizens, whose symptomatology and anatomy stamps it as cerebro-spinal meningitis. A universal prevalence of this disease we find only in 1837; in which it spread from the south of France in two directions, eastwardly and westwardly, encompassing the central tablelands, and the largest portion of the central valley of that country, to break out afresh in the north. In one direction the epidemic progressed from Bayonne along the western coast, passing through Bordeaux, Rochelle, &c., to the Loire, in whose valley it spread more rapidly: from here it took a northwesterly turn, re-appeared in Brest and Cherburg, took a lateral course to Versailles, and spread finally towards northeast in the valley of the Rhine, and devasted Elsass and Lorraine. The second direction of the disease commenced at Foix and Perpignan, along the coast of the Mediteranean; where it penetrated to Toulon and Marseille, then upwards through the valley of the Rhone to Lyons. This course lasted from 1833 to 1842: now the disease paused until 1846, in which it prevailed in the same localities until 1849, but taking a different course, without touching any new district in the main. On the whole, fifty-seven epidemics became developed in France—mostly along the courses of the rivers, Adour, Loire, Rhone and Rhine. Two years after its appearance in France, it broke out in Lower Italy—first in the Terra de Lavora, then extensively in Calabria ulteriore and Principato ulteriore, and in the isolated epidemics in Terra de Bari, and other territories of Naples. These epidemics comprise the years 1839 to 41. In 1843 it broke out in isolated places of Naples and Sicily. Between 1839 and 1847 it prevailed in Algiers, particularly in the provinces of Constantine and Algiers. In North America it appeared in 1842, in isolated places of Tennessee and Alabama; 1845–47 in Illinois, Alabama, Mississippi, Arkansas, and in the city of New Orleans; 1842–50 in isolated localities of Western Pennsylvania; 1856–57 in New York and in North Carolina; in the winter of 1862–63, in the camp near Newbern in North-Carolina, among the Union troops. In Spain, we first find it in 1844 in Gibraltar, almost exclusively among the citizens. In Denmark it prevailed in 1845 to 1848, tolerably malignant; 1846 in the work-houses of Ireland, in Dublin, Belfast, &c., simultaneously in Edinburgh. In Sweden, it appeared for the first time in 1850, and spread until 1861, from the south northward, past the 60th degree northern latitude. In the years 1859–60, it broke out in an entirely isolated spot of Norway, and among the Dutch troops in Arnhem. In Germany, agreeable to the description of Prof. Rimeiker, there occurred a large amount of sickness of this kind in Wurzberg in Bavaria.

From this historie-geographie treatise we conclude that neither climate nor elevation, nor the formation of the soil, nor swamps, were of any consideration in the creation of this disease. On the contrary it is most remarkable that the vast majority of epidemics prevailed in winter or in the spring. In Algiers, of six epidemics, five raged in the winter; in North America, of sixteen, eleven in the winter, four in the spring; in Denmark, all in the winter; in Sweden, partly in the winter, partly in the spring. In France and Switzerland, of fifty-seven epidemics, thirty-six in winter and six in spring; in Italy, all in the winter; in Sicily also in the summer Yet, not only did many epidemics prevail at other seasons of the year; but, says the author, that while the same weather prevailed in a larger circle of the country, the disease appeared only in circumscribed districts. Of great importance appear to be the hygienie relations. In France, of fifty-seven epidemics, forty-six raged exclusively among the military, five simultaneously in the army and among the citizens, and six exclusively among the citizens. In Algiers, three epidemics spread among the military only; four simultaneously among the soldiers and citizens, and only one among the citizens exclusively. In Arnhem, the army alone was afflicted. In Denmark, Ireland, and Sweden, the citizens only suffered. French-army physicians observed that the disease prevails more extensively among the rank and file, than among the non-commissioned or commissioned officers. The disease broke out chiefly in barracks; or in crowded, illy ventilated dwellings, in prisons, &c. Yet, as under the same circumstances, originate also the exanthematic and the enteric

Typhus, flux, and other infectious diseases, we cannot recognize in the human exhalations, the generic cause of these specific maladies; but we may range them among the pre-disposing causes. And although the genuine cause of this malady is as yet entirely unknown, yet all we see points towards the infectious character of the same.

Most investigators deny its being contagious; but the author remarks, that in France it seemed to adhere to certain divisions of the troops, who carried it wherever they went. One regiment, in which it appeared in 1837, while stationed at Bayonne, carried it to Rochefort, then to a garrison station on the river Loire; and finally, from thence to Versailles, where, after a four years' duration, it became extinct in the same regiment.

CASE OF DOUBTFUL SEX.

Mr. ——— of the county of Bell, aged 32 years, appeared before me, examiner of conscripts, on oath as follows: "Doubtful sex and general debility, and of a feminine voice and constitution."

Upon examination I learned that he was born in Bullett county, Kentucky: that he has four brothers, all well-formed men; and that his father and mother were healthy stout people. I find, on examination, that he is without beard—never had any; that his mammary glands are nearly the size of a woman's; that his voice is a treble, his lips large; and general contour that of a female; that he has hairs on the pubis, and a small penis about the size of a boy of five years; that there is a small tubercle on the left side where the testicle should be, and he says that one like it sometimes appears in the right side when he rides. Has never passed blood from the penis; has no monthly pains; can retract the prepuce and the penis; gets hard once a month, sometimes oftener. No semen ever passed, though he has been addicted to masturbation. I recommended his discharge on the above-named grounds; believing that this is a case of atrophy of the testicles in infancy or childhood. He did not recollect when the hairs on the pubis began to appear—says over twenty years.

ONCLUSION OF THE VAGINA.

Negro Girl of Girard Munson's, Brazeria County, Texas.

March 1863.

On examination I found this girl to have been married seven years; had had one child, and soon afterwards found herself in present situation. She was not unusually full in hypogastric region; but had not menstruated in five years: suffered severely every four weeks in the region of the womb. Upon examination per vaginam, I found the vagina entirely closed about one inch from its external orifice, and seemed to be puckered together. Her general health was good, and good constitution, which did not seem impaired by her situation.

I proposed to operate by cutting into the womb; which was done in the following manner, assisted by Dr. J. J. Oatis: I made a wax bougie nine inches long and one thick, by cutting a linen cloth of a triangular shape, and dipping it in hot bees-wax; then rolling it up, and, as it cooled, compressing it by rolling it under a large spatula like that used in making pills, paired off all irregular points and made it smooth; then re-rolled it. This bougie I inserted into the rectum, and a catheter into the bladder. I now took a short bistouri, and cut from right to left between the bougie and sound, making an incision of about one-half of an inch. I then stopped and put a sponge through a glass speculum, and pressed it up against this incision, and let it remain there until the next day, when I repeated the cutting. In five days I had cut through to the mouth of the womb. When I reached the mouth of the womb I found it perfectly healthy; and all around the mouth sound, and well covered with mucous membrane. When I took out the last sponge, I found it covered with blood and matter, and very offensive; and a large quantity of this matter was discharged for three days. It was so offensive that it nearly took away my breath when I removed the sponge, for several days. I continued the sponge until all the parts of the vagina were fully dilated, and covered with mucous membrane, and looked perfectly natural; only the part incised looked redder. I sent her home: in six weeks after she came to my office as cured; but at the end of two weeks she was sent back, she having had another spell of her "pains," and no discharge of menses. I then put her on Tincture of Aloes aad Tincture of Cantharides, and left her with a sponge in the vagina, and used every day the glass speculum. She told me she had full connection with her husband while at home, and she was as well as she ever was except these "pains." In two weeks she became unwell, and she had a return flow of the menses; and I again sent her home cured, and the vagina perfectly natural—even the former redness had left the vagina.

TREATMENT OF ASTHMA BY NITRIC ACID.

BY D. C. HEWSON, M. D., GALVESTON, TEXAS.

Having had several cases of Asthma to treat, and having had the good fortune to cure at least two of them by the use of Nitric Acid, I have thought that I would give the profession the advantage—in order that others might repeat the experiment.

It is a well-known fact that the fumes of nitrate of potass will relieve a fit of Asthma. It is also known that Nitric Acid has been extolled by the profession at large, as almost a specific in pertussis. It is also known that both of these diseases are spasmodic.

Now, if the nitrous vapor relieve in one case and the Nitric Acid in the other, why should not these be used in the same disease?

The manner of giving it is to commence with Nitric Acid iij gtt. three times a day in a glass full of water, and increase the dose one drop every week until the patient has taken six drops; when he should desist for a week, and again commence with the minimum dose. It is an experiment which can certainly do no Asthmatic patient harm, and might result in his recovery.

I have two patients at this time who are using the medicine, and certainly while they are taking it they have not had any attack.

135.—ON THE TREATMENT OF INFANTILE HYDROCEPHALUS BY ELASTIC PRESSURE.

BY RICHARD PHILLIPS, ESQ., LONDON.

[Five and thirty years it was known that it was possible to get rid of encephaloid effusion by pressure; probably the difficulties attending the methods heretofore used, have prevented the use of this agent tn treatment.]

In the hydrocephalus of infants, when once the soft union of the carnial bones yields to the expanding influence of the fluid within the brain, I believe the progressive increase of the effusion is mainly attributable to an atonic, passive condition of the meningeal vessels, resulting from the absence that resisting medium offered by the healthy, normal calvarium. Truly this is but a *post hoc* by hypothesis; still, inasmuch as it explains very satisfactorily the principles on which my treatment is based—viz., pressure, or *active resistance*, there seems to me no good reason why it should not be advanced. Ordinarily, in this disease, effusion goes on gradually increasing till a limit is reached of the distensibility of the dura mater, or till death from internal structural lesion ensues. In the former instance, the absorbents, flaccid or paralyzed, or in some way rendered useless, are unable to dispose of the percolated fluid, when the whole mass of brain, serum, and distended membranes, become consequently encased by an extension of ossific, deposits, and the poor patient lives on, an object of lasting pity, most probably utterly helpless, having a head vastly disproportioned in size and weight to the power of the muscles appointed to direct its various movements, and which cannot therefore maintain (or if so, with the greatest difficulty) its centre of gravity on the spinal column, its natural support and fulcrum of leverage.

Case 1.—Mrs. T——'s infant son, whose head had been subjected to severe pressure at birth, owing to the early rupture of the membranes whilst the os uteri was in a rigid, undiluted state, rendered necessary by flooding from a partial placental presentation. This child, two days after birth, appeared to be in great pain, which was attributed by the nurse to the bowels not being cleaned of the meconium. A little ordinary medicine was given for this purpose, but without any relief to the child's sufferings; for, at short intervals, its screams continued day and night. My attention was now attracted by a heat and redness of the scalp, and apparent enlargement of the head. The latter in a few days became more obvious; the vessels of the scalp more engorged; the eyes fixed downwards, and having a tremulous motion, and the stomach so irritable, that but little food could possibly have been retained in it. Day after day the enlargement continued to increase rapidly, the sutures gradually yielding to the hydrostatic pressure from within, so that by the end of a fortnight, I could place my ring finger between the division of the frontal bone, along the longitudinal and also the lateral sinuses; even the nasal bones had a space between them. At this time the operation of tapping was proposed, but the poor child's powers seemed so entirely exhausted, that the father, (a retired surgeon), after much deliberation, preferred that his child should take its chance of living or dying in a natural way, to subjecting it to an operation. In this view my own judgment entirely coincided. Three days later the appearance of the little sufferer was most revolting, the scalp distended to its utmost limits, shining and livid from venous congestion; the eyes were directed downwards and inwards below the axis of vision, and constantly oscillating; the limbs perfectly emaciated and shrunken, and the countenance wearing the expression of a seven months' hydrocephalic fœtus. There was still left a slight power of suction, but the stomach remained equally irritable, and the child kept constantly screaming. The tension of scalp was at this time so great, that it was difficult to divest oneself of the apprehension lest the whole mass should suddenly burst, and thus terminate a scene too distressing to contemplate.

Partly with the view of inducing absorption of the fluid, but chiefly with the hope of preventing the threatened catastrophe, I constructed an elastic loop, or fillet, with strong India-rubber webbing, two inches wide, with which to encircle the head. Having made the fillet purposely too small in the girth, I was enabled, by stretching it with both hands from within, so to adjust it as to exoercise a considerable amount of well-regulated pressure round the distended cranium. A cold spirit lotion was also applied frequently to the heated scalp, and the head directed to be supported by a pillow.

On the third day after adjusting up the elastic fillet, the nurse informed me that the band had become loose, and which I thought might probably arise from the effect of heat on the caoutchouc; but on a close examination, it was obvious that the cranial bones had approximated each other, and that there was less tension of the scalp. I now had the fillet taken in to the extent of an inch and a half, stretched it, and put it on again.

In three days more the band was observed to be quite slack, and I had the gratification of finding the different bones had almost been brought into contact; that the scalp was slightly wrinkled; the eyes again visible, and less tremulous, and the general aspect of the child greatly improved. The fillet was again taken up, re-adjusted, and allowed to remain on another fortnight; by which time the bones had positively overlapped each other considerably, forming prominent ridges in the situation of the different sutures. The eyes would not follow a lighted candle in any direction, and had but little of the vibratory, oscillating motion which had been so conspicuous throughout; the stomach retained all the food, and the child, showing no signs of pain or distress, gradually gained flesh, and became more vigorous.

Union having apparently taken place between the cranial bones, except, of course, at the fontanelles, which were not however larger than usual, I conceived all that simple pressure and mechanical support could effect had been obtained, so the fillet was removed, and directions given to sponge the scalp frequently with an evaporating lotion.

Eight months after birth the condition of the child was as follows: The head certainly somewhat larger than that of a child of a similar age, but moves easily at will in all directions; the ridges produced by the over-riding of the bones are fairly levelled off, and the sutures feel smooth and even; the anterior fontanelle is depressed below the level of the adjacent parts, and but little hair has grown on the scalp. The child exhibits, in a diminished degree, the ordinary marks of mental development; but there is left a slight strabismus, and quivering motion of one eye: the limbs are tolerably well developed, and the flesh feels firm and healthy. After a short course of iodide of iron the eye became steady, but the squint remained. It seemed probable indeed that all the fluid was not absorbed, but that the portion still left may possibly be necessary to afford the required support to the brain, till the unnatural sized cranian case became filled by the gradual growth of the organ. I therefore determined to let well alone, taking good care to give every facility for increasing the child's constitutional vigour in every possible way.

All has gone on well with the case; the boy is now ten years of age, has gone through the catalogue of the diseases of childhood, in addition to a series of clonic convulsions for twenty-four hours, after swallowing some India-rubber, but which ceased as soon as the substance passed in a semi-dissolved state. He is chiefly distinguished from his brother by being a little more headstrong and impetuous, and having a slight cast in one eye.

Case 2.—J. W———, a twin child, of the age of three months, had a febrile attack, with great heat of scalp, marked scantiness of urine, irritability of the stomach, constant screaming fits, and slight convulsions, with the head thrown backwards upon the pillow. The head, according to the mother's account, soon began to enlarge; and, at the age of six months, when I first saw the case, measured twenty inches in circumferance, the parietal bones were separated from each other, and from the frontal and occipital bones, to the extent of a quarter of an inch, the anterior fontanelle was raised and fluctuating, the eyes were depressed below the margin of the lower lids and tremulous, and the whole trunk and extremities in a state of great emaciation; the abdomen swollen and tympanitic.

The elastic fillet was adjusted as in the former case, the bowels cleansed by mild mercurials and castor oil, and a course of iodide of iron prescribed. The size of the child's head, in ten days, began to diminish, and the edges of the bones to approximate each other; the eyes became by degrees more visible and less tremulous; the heat of scalp greatly lessened; and the irritable state of the stomach perfectly tranquil. At the end of three months there was a firm, bony union at the different cranial sutures; the head had assumed a conical form, but the fontanelle was quite flat; the eyes had regained their proper position as to elevation, but there was slight strabismus and oscillation of the globes when the head was moved. The child had now also considerable power of moving its head into the upright position; and that for the first time; the limbs had become plump and fairly vigorous: It would notice objects as much as other children of its age; and, instead of being cross-tempered, irritable, and restless, had become remarkably amiable, and a tranquil sleeper.

It may be well here to mention, that owing to the more advanced age of the child, there was some difficulty in preventing it from slipping off the fillet with its fingers, and that it became necessary in consequence to secure it by cross-bands over the vortex, and a chinstay below.

One or two inferences have occurred to me in the treatment of the foregoing cases, which it may be as well, perhaps, to mention as bearing on the particular time when success may most reasonably be hoped for.

1st. It would appear that when hydrocephalus is progressing in young infants, the process of ossification in the cranial bones goes on with supernatural rapidity, as if nature were eager to protect the all-important centre or life as quickly as possible, unduly exposed as it is, under present circumstances, to external injury; the consequence of which is, that after the edges of the bones have been brought together and union taken place, the circumference of the head still remains considerably larger than would have been the case had there been no disease. *The earliest possible age, therefore, and where the case is not of long standing, are, I conceive, the conditions most favourable to the treatment by pressure.*

2d. That although when we have succeeded in approximating the bones, and maintaining them in that position long enough to effect their intimate union, there is reason to believe there may yet remain more or less unabsorbed fluid in the ventricles, as evidenced by the tremulous state of the eyes and an abnormally large cranium, this is not nevertheless to be regarded as an unsatisfactory result, inasmuch as it was perfectly evident to me, when observing the progress of Case No. 1, that in proportion as the encephalon became developed synchronous with the body's growth, so the remaining fluid in the ventricles was gradually absorbed and disposed of, in consequence of the increased pressure within the cranium; the bones being now fixed just as the larger portion of fluid had been influenced by the sustained pressure *ab externo*.

In Case No. 3, the head is now much larger in proportion than was the case with the first child at the same period of its history, which I attribute to the circumstance of the cranial bones having had time to radiate by ossification to a more extensive circumference before the treatment was commenced; but the *concave* state of the fontanelle, the firm union of all the bones, the cool state and natural colour of the scalp, the lessening of the strabismus, the rapid development of the mental faculties, as well as the progressive growth of the limbs and frame generally,—all lead me to conclude that it is following precisely the same course as did case No. 1, and that in due time the cure will be in every respect as complete and satisfactory in one as the other. I deemed it right in this case to give a course of iodide of iron, because the child was so pale and anæmic (scalp excepted) when first brought to me. It had for some weeks been under treatment in very competent hands, and was considered to be in a hopeless state when placed under my charge. This I mention to show that even in what seemed to be the most unpromising cases, there is good reason to anticipate the happiest results from the peculiar form of treatment here so imperfectly advocated and explained. Not, indeed, that I am presumptuous enough to suppose that all cases of infantile hydrocephalus are to be cured in future on the principles I have endeavored to enunciate; but with perfect truth it may be said, that a more exaggerated example of the disease than Case No. 1, could scarcely be conceived; neither would it be easy to select a more unpromising case, from length of standing and constitutional atony, for probationary experience than Case No. 2.

Sir Gilbert Blane (the authority before referred to) and others have treated, with partial success, cases of hydrocephalus by mechanical pressure, the means employed being bandages and adhesive strapping; but this is very different, both in principle and extent of power, from the sustained, well-regulated support and pressure obtained by the elastic fillet I employ. In the former there is all the inconvenience arising from the growth of hair on the scalp to be considered, and also the great probability that all the good we could reasonably hope for must be limited to a very short period after the strapping is applied; for as there is no elasticity in the material used, all pressure ceases as soon as diminution of bulk begins; whereas, in the latter mode, the pressure is kept up in a greater or lesser degree, till the caoutchouc filaments have shrunk to their natural limits. The taking up and re-adjusting, too, of the elastic fillet, is an affair of but a few minutes, or even less still, if we are prepared with a proper succession of sizes; but the removal of a number of adhesive straps from the hairy scalp of a screaming child, and the careful re-adjustment of the same every twenty-four hours, is a process requiring almost the attributes of a Job, and not over-sensitive state of the operator's *portio mollis.*

[*Lancet, Nov.* 28, 1857, *p.* 543.

7.—THE BLISTER TREATMENT OF RHEUMATIC FEVER.

Cases under the care of Dr. Jefferson, at St. Bartholomew's Hospital.

[See last volume of the *Retrospect*, Synopsis, page 273, for a brief epitome of this plan of treatment.]

The safety of the heart is undoubtly the main point at which every treatment must be directed; and in this particular more especially does the Blister Treatment exhibit its peculair value. In a communication read Wednesday, March 22, by Dr. Davis at the Hunterian Society, he stated that of 50 cases which had been admitted under his care at the London Hospital, 27 had hearts already damaged by recent or old inflammatory mischief, and 23 were free from cardiac complication. The results of the blister treatment in these fifty cases showed that as many as twenty-five, when discharged from the Hospital, were totally free from any endo- or peri-cardiac disease; or, in other words, that while every heart was saved which came in sound, two recent cases of endo-carditis were apparently cured by the alteration effected, as he believed, in the alkalinity of the blood by the free discharge of serum from the neighborhood of the inflamed joints. Dr. Davies also states that those cases answer best to the treatment in which a great number of joints are simultaneously affected, and when, by setting up, a large amount of discharging surface in the proximity of the inflamed parts, a large proportion of the *materias morbi* may be evacuated at one *coup*. Cases where the poison would appear to crop up to the surface by instalments, attacking the various joints at intervals of days, do not afford such striking examples of the efficacy of the treatment. The first case, where an unexampled amount of blister was applied in an extremely acute case, and where the patient was discharged, cured in thirteen days, will well illustrate Dr. Davies' position That this treatment is not simply local in its action is also shown in the alteration produced in the urine in the majority of the cases cited; for in 11 the urine remained acid, but generally diminished in acidity during the whole period of the case; in 22 it became neutral shortly after the serum was discharged; in ten it exhibited alkaline re-action; while in 7 no notes were taken.

Case 1.—William S., aged thirty-two, a working silversmith, and exposed to great variations of temperature, was admitted into the Hospital on December 2, the seventh day of his illness, and was discharged cured on December 15, thirteen days after he came under treatment. Eleven blisters, amounting to 482 square inches, were applied simultaneously, and with almost immediate relief. As the patient said, "the rheumatic pains left me as soon as the blisters drew;" and on the third day from admission all pain had disappeared. The pulse fell from 105 to 95 per minute; the temperature from 101.4 to 99.6 and 98.8; no cardiac mischief was developed. The urine, scanty and acid on admission, was rendered slightly albuminous from the presence in it of a small quantity of blood. The slight stranguary and albumen, however, disappeared in forty-eight hours. He had slept very badly from the commencement of his illness, but as soon as the poultices were applied to the blistered surfaces sleep returned, and was "good" every night during the time he remained in the Hospital. His appetite, bad on admission, was good on the third day; and his thirst, which was slight when he came under treatment, was not increased by the blisters, is reported to be absent on the fourth day. The heart was sound when he came under treatment, and free from disease when he left the Hospital.

Case 2.—Wm. P., aged 22, bootmaker, was attacked for the first time, with rheumatic fever on November 29. He was admitted into the Hospital on December 6, the seventh day of his illness, and was discharged on January 2, 1865. Seven blisters, equal to $133\frac{5}{8}$ square inches, were applied on December 9, and the pain, which was severe previous to their application, had disappeared as soon as the surfaces had been dressed. The following day the clinical report states:—"There is no pain anywhere, and with the exception of a little uneasiness on the right shoulder on December 17, he was quite easy and comfortable until the day of his discharge." The pulse fell from 110 on admission to 90 per minute on the third day. The temperature from 104.4 to 98.6. The heart presented a systolic murmur, distinct at admission over base and apex, and was unchanged at the time of patient's leaving the Hospital. His sleep, which was stated to be bad before the blister application, was improved on the second, good on the third night, and remained satisfactory until he was discharged. The urine presented a slight trace of albumen as the result of the treatment, but was normal and free from that substance forty-eight hours after the blisters had been applied. The appetite, which was indifferent on admission, is reported to have been "good" on the fourth day, while the thirst was absent at first, and continued so, unaffected by the local irritation set up by the blisters.

Case 3.—John B., aged nineteen, was admitted on December 8, 1866, the seventh day of his disease, and discharged January 30, 1865. He had, however, been up and dressed from January 11, 1865. Eight blisters were applied on December 9, three on the 12th, one on the 13th, one on the 14th, one on the 21st, making in all 603½ square inches of empl. lyttæ. The day succeeding the application of the eight blisters the report states that all pain had disappeared. On the fourth day from that date, the patient has "now a little pain in the right shoulder, and says he wants another blister for it," which is applied and followed by great relief. The clinical account says:—"December 14.—The patient has no pain anywhere. December 18.—The same. December 19. Had pain in the left knee yesterday; I think he caught cold from going to the closet yesterday. And December 20.—The left ankle and knee were swollen." The application of the blister removed all pain and swelling, and never returned during the time he continued under treatment. The pulse fell from 108 to 86, and varied from time to time, with the appearance of the affection in different joints. The temperature fell from 100.8 to 99.4, and also varied with the pulse. The heart presented before the application a systolic murmur at the apex, which remained unaltered at the time of his leaving the ward. His sleep, which had been bad since December 2, was pretty good on the night after the blisters had been dressed; moderate on the fourth; good on the fifth; disturbed by a blister considerably on the 6th; good on the following and every succeeding night. The urine—Its reaction before the blister application was not noted, but the treatment induced some stranguary and traces of albumen, and its condition varied from time to time with the variable condition of the joints. Appetite is stated to have been bad on admission; a little better on the second day from the application of the blisters; improving and gradually becoming good from the fifth day of the treatment. The thirst was slight when the patient entered the Hospital. It appears, however, to have been considerably increased after the application of the blisters, but the symptoms vanished in a few days.

Case 4.—Charles P., aged twenty, butcher, already previously the subject of acute rheumatism, was admitted on December 8, 1864, the fourteenth day of his illness, and discharged on January 18, 1865. Four blisters, equal to 118$\frac{3}{8}$ square inches, were applied simultaneously, and with such relief that on the day succeeding the application all pain had disappeared, and his sleep, which for fourteen days had been wretched and without benefit to him, is reported as being good, and continuing satisfactory for the remainder of the time he was under observation. The pulse, which was 80 and 66 respectively on the two days before blistering, became 72, 68, 63, and ultimately 60. The temperature, 100.4 and 98.8, before blistering, became 98.8, 99.2, 98, and ultimately, on cure, 98.4. The heart was free from disease on admission, and continued the same during the entire period. The urine presented after the blistering, a very slight trace of albumen. The appetite, which had been bad since Nov. 25, was very much improved on the day after the blisters had been applied. The report says, "he eats everything before him;" and it continued excellent from that date. The thirst was great on admission, only slight after the blisters were applied, and stated to be *nil* on the following day.

Case 5.—Susan J., aged twenty-two, needlewoman, of fair complexion and sanguine temperament, and who had had three previous attacks, was admitted with acute rheumatism on December 12, the fourth day of her illness, and discharged on February 2, 1865. Six blisters were applied; four on December 12, and two on December 14, equal to 328 square inches. On the day succeeding the first application, the report states: "There is no pain now in the hands and ankles, but pain came on in the night in both shoulders, and she has had a very slight pain in passing urine." After the second application the report continues: "Feels much better; no pain anywhere; got out of bed this morning; wrist still swollen and red, but soft, moveable, and not tender to pressure." On the following day report states: "She cannot even invent a pain anywhere; looks well, and is only weak. The pulse fell in this case from 114 to 100, 90, and 70, and was 84 at the time she left the Hospital. The temperature fell from 101.7 to 99.7, or two degrees. The heart was diseased on admission, and the systolic murmur at base and apex remained unchanged. The urine, at first acid, and containing a slight trace of albumen from the blisters, became alkaline on the second day from the time of the local application, and normal speedily after this date. Her sleep, which had been almost absent from December 8, is stated to have somewhat returned after the blisters were removed, to be much better on the fourth, and very good on the fifth night, and to have continued satisfactory until the time she was discharged. Her appetite, none on admission, was improved immediately after the application of the second set of blisters, and pronounced good on the fifth day after the last-named application. The thirst was very great on admission, unaltered the day after the blistering process, much less in amount on the following day, and none on the succeeding days.

[The following case occurred under Dr. Davies' own care at the London Hospital]:

A case at present under the care of Dr. Davies affords an excellent example of the safe and rapid results of the treatment. The patient was brought in to the London Hospital on Friday night completely crippled from acute rheumatism, and presenting the usual symptoms of that disease. He described his agony as intense. Ten blisters were at once applied, and a grain of morphia was administered internally.

On the Saturday evening he was free from all pain.

On the Sunday he declared himself to be comfortable, and his joints to be moveable.

On the Monday morning he sat up and washed himself, and in the evening was able to walk down the ward to the closet.

On Tuesday he was perfectly easy, with appetite returned, and thirst absent; and was ordered to have a chop and a pint of Bass's ale, as he had been accustomed to live rather freely. The urine in this case was found to be strongly alkaline on re-action, and perfectly free from any trace of albumen as tested by heat and nitric acid. He had had no stranguary. On being questioned as to the pain induced by the blisters, he said that he would gladly have them repeated were he unfortunate enough to have another attack of rheumatism. No cardiac mischief was developed. No medicine beyond the morphia already mentioned had been administered.

[*Medical Times and Gazette, April* 1, 1865, *p.* 333.

80.—ON THE TREATMENT OF WOUNDS OF THE PALMAR ARCH.

By Dr. Charles D. Arnott, Gorleston.

[In hemorrhage from palmar wounds, whether primary or secondary, correctly adjusted pressure should supersede that more painful and hazardous procedure hitherto deemed requisite, viz., indirect arterial deligation. The following facts and arguments are adduced in support of the above position.]

Ligature of the larger arterial trunks is, under ordinary circumstances, an operation attended with considerable danger. The case of wound of the palmar arch which I formerly commented on, and in which ligature succeeded ligature only to complicate and increase the danger ten fold, and eventually to entail a condition so desperate, that amputation at the shoulder-joint (surely no very trivial matter) was even beyond adoption, and mere "temporizing with the case;" in other words, hopelessly committing the patient to fate alone remained,—fully verifies my statement, and shows what, under similar circumstances, may be expetced to be every now and again realized. But even were such disasters only possible, instead of, as the truth is, highly probable, it cannot be unprofitable to propose a measure safe and efficient, to take the place of one so fraught with danger.

Theory amply elucidates how pressure must be as effectual an auxiliary for the arrest of hemorrhage from palmar wounds, as arterial deligation on the cardiac aspect. All that the latter can accomplish, the former can also equally efficiently. The *modus operandi* of both is in one respect identical—namely, to modify, and lessen the impetus of, the advancing blood-wave at the wound's site, and thus to counteract the chief obstacle which nature has to encounter in perfecting her permanent hæmostatics. There are, moreover, no vessels in the body, of corresponding magnitude, more favorably situated for easy, accurate, and efficient compression than those of the forearm and arm. Any one may practically verify this assertion on his own person, and the surprise will be, how slight and bearable an amount of compressing power is required to arrest the arterial current, and annihilate cardiac impulse on the distal aspect of the obstructing force. Weakening of the circulation in the wounded part is then all that can be effected by either measure, and all that is really required. The only existing difference is, that by the one this may be accomplished simply and safely; by the other, only at considerable risk.

The general principles to be followed in the application of pressure as a hæmostatic, under ordinary circumstances, are pretty well understood. It must be accurate, not unduly severe, and steadily maintained. The graduated compress affords the most effectual mode for its employment. The limb is first uniformly bandaged from below up to the wound; the compress is then applied piece by piece, the smallest first, accurately in contact with the bleeding point; over this another and another, gradually increasing in size, so as to give the whole a conical form, and to fill the wound completely; the last, the largest, above the level of the wound. Over this the bandage is continued, keeping all correctly adjusted. In the minor forms of hemorrhage, where this mode of treatment is specially suited, pressure thus applied generally proves efficient.

But when pressure has to be adopted under more formidable conditions, some modifications to this, the ordinary mode of its application, are indispensable; for example, in the case of wound of the palmar arch, we have not mere capillary oozing, or an insignificant arterial jet or two to contend with, but blood rushing copiously, and with some impetus, from a vessel of considerable size, unfavorably situated for the occurence of natural hæmostatics. If pressure, as ordinarily applied, were under such circumstances adopted, it must (in order to prove effectual) be dangerously severe, and by this one element alone defeat itself. We have here a true illustration of the benefits to be obtained by a judicious division of labour. Compression at the wound's site cannot be relied on solely; but *indirect arterial compression* must be adopted as an adjuvant to mitigate the force of the circulation at the wound. This effected, all that theory would predicate, experience proves correct; hemorrhage is thus readily restrained, and the most favourable chance for reparation of the wounded vessel afforded, without incurring any danger.

In adjusting the compress at the wound, it is of primary importance that it be placed in a *dry bed.* The nitrate of silver admirably assists in carrying out this paramount indication. The wound is to be lightly pencilled over with this substance. Its effect is to constringe to some extent the divided vessels, and what is of more consequence, to form instantaneously a coagulated and adherent film or pellicel upon the surface of the wound, highly advantageous in allowing the deeper portions of the compress to be accurately and drily applied.

The surgical treatment required for the arrest of hemorrhage from wounds of the palmar arch may be briefly summed up. It consists in bandaging the fingers separately, continuing upwards to the wound, accurately adjusting the graduated compress at the wound in a dry bed, with the aid of the nitrate of silver and applying slowing compression to radial and ulner, or brachial arteries, according to convenience. It will be found, under all circumstances, efficient in controlling bleeding, and immeasurably preferable to indirect arterial deligation, inasmuch as it is free from danger. I shall append a case or two confirmatory of its efficiency.

CASE 1.—J. W., aged fifty-eight, fell upon an iron-toothed rake, inflicting two comparatively unimportant punctures in the palm, of no great depth. About a teaspoonful of blood was lost at the time. Two days afterwards, throbbing pain, heat, redness and swelling supervened in the part, the man became restless and thirsty, and exhibited all the indications of smart febrile accession. The bowels were sluggish. Poulticing and frequent fomentation of the hand were recommended, some laxative medicine were administered, and the necessary restrictions as to rest of the part, diet, &c., enforced. For two days the symptoms were, in no degree, mitigated. The patient's suffering was extreme. At the end of the sixth day after the accident, an abscess was detected in the palm, and evacuated. There was no bleeding of any moment; and what there was, ceased before the dressing was completed. Next morning, the suffering was somewhat appeased; there was pretty profuse discharge, and all seemed going on satisfactorily. In the evening, I was hastily summoned, the patient being, according to the messenger's account, "bleeding to death." Upon my arrival, the man lay on the floor, deluged in blood I found that he had fainted, but, with a little attention, he soon came round. The hand, in the dilemma, had been swathed with a number of incongruous appliances—towels, stockings, handkerchiefs, and a tablecloth. These were removed, and a tourniquet was adjusted. The wound was cleaned and examined. Ulceration had been, undoubtedly, going on. There was a large boggy cavity, and the evacuating incision, which the abscess had required, was quite inadequate for the purpose of exploration. I enlarged the opening, but could not detect any bleeding point. As soon as the tourniquet was slackened, blood welled copiously into the cavity, obscuring everything. One or more arterial branches, of some calibre, had been opened into.

I applied a graduated compress to the wound in the ordinary way, and was about to leave the house, but was recalled by the patient telling me the blood was coming through the dressing. It soon began to drop on the floor briskly. I re-applied the tourniquet, undid the wound, did it up afresh more effectually, and waited half an hour without further hemorrhage occurring. He passed the night pretty comfortably. Next morning at eight o'clock, the bleeding recurred. The case now assumed a serious aspect, and something summary was needed. Ligature of the brachial I had been taught to regard as the "one thing needful;" and I accordingly proposed and explained it. My patient had a great horror of the knife, and declared that he would rather die than submit. It then occurred to me to attempt obstruction of the radial and ulner trunks by compression. My views were stated, and cheerfully acceded to. The fingers were accurately bandaged, the wound filled with the graduated compress, and the radial and ulnar arteries obstructed by continuing the bandage upwards, and adjusting over them two halves of a phial-cork, covered with lint. The tourniquet was gradually loosened, but retained ready for immediate re-application. All hemorrhage from that time forth was completely controlled. The slowing compresses were removed four days subsequently, and the entire bandaging at the end of the week. In two days more, the compress in the wound became loosened with the discharge, and was extruded. Cicatrization advanced satisfactorily, and the wound healed without a bad symptom. The patient declared that the last and efficient treatment was by the most comfortable, and that it was not productive of anything like so much tension and discomfort as when the one compress in the wound was only used.

Remarks.—This is a complete type of the majority of cases of secondary hemorrhage from palmar wounds, in which deligation of the arterial trunks, on the cardiac aspect, is regarded as indispensable and inevitable. It forcibly supports the conclusion, that this class of cases is amenable to the simpler treatment by distributed pressure.

CASE 2. W. P., aged twenty-eight, sustained a deeply-incised wound of the palm of the right hand while in the act of mending a broken window. It extended obliquely from the ball of the thumb to within half an inch of the base of the little finger. Hemorrhage was immediate and brisk, issuing in a jet, according to the patient's statement, a distance of five or six yards. The man was very much alarmed, and fainted. The wound was dressed by a shipwright, an authority in such matters. His mode of proceeding was simple. The cavity of the wound was first plugged with chewed tobacco, and this was surmounted and kept *in situ* by a binding of oakum firmly applied. Hemorrhage was thus arrested. In the course of a few hours, the swelling and engorgement of the parts below the constriction became almost intolerable. Two days afterwards the wound became hot, throbbing, and painful; the whole hand swelled enormously, and general suffering so extreme supervened, that the unfortunate man at last sought my advice.

The plug of tobacco was hard and tightly adherent. I removed it, after soaking with warm water, piece by piece. During this procedure I opened a pent-up collection of pus, with which escaped a triangular fragment of glass of some size, and, before getting out the last of the plug, hemorrhage came on, which filled the wound instantly on the removal of the sponge. The palmar arch had evidently been wounded, and the vessel was still open. I applied the tourniquet, sponged out the wound, and sought carefully for the wounded vessel. The textures were so changed that I could not detect any with certainty. The fingers were now separately bandaged, and the separate ends fixed to a wider roller, which was to be continued over the wound, and as far up the arm as might be necessary. The wound was sponged out as drily as possible, and lightly touched with the nitrate of silver. The compress was accurately adjusted in the wound, and secured by a turn or two of the roller; the slowing compresses (again consisting of two halves of a phial-cork covered with lint) were then applied, and kept *in situ* by a turn or two of the bandage. The tourniquet was gradually slackened, and the effect watched. The hemorrhage was now completely arrested, and the man soon felt quite comfortable, at once admitting the great superiority in the style of dressing.

Next day, in consequence of considerable subsidence of inflammatory swelling, the whole apparatus was becoming loose. There was, however, no return of bleeding, which was rather remarkable. I put on an additional roller to re-secure the former appliances. All went on well. Four days subsequently, the apparatus again becoming loose, I thought it might be safely removed. I did so, leaving the compress gradually to work its own way out of the wound as it might become loosened by the discharges. The swelling of the hand had become materially abated. Two deep indentations existed at the site of the slowing compressors. Pus was oozing from the wound, but there was not even a stain of blood. The wound was treated with simple warm-water dressing, and injunctions were given, in case of recurrence of hemorrhage, to keep a sponge firmly pressed upon the bleeding point until my arrival. Not a single bad symptom presented itself afterwards, and the man steadily recovered.

CASE 3. J. C., aged seventeen, mariner's apprentice. While descending the hold at sea, a heavy stanchion which served as a hand-rail gave way, and he, with it, fell upon the ballast in the bottom of the vessel, a distance of several feet. His right hand was crushed between the stanchion and a large angular piece of chalk. The metacarpal bones of the middle and ring fingers were fractured, and a severe contused and lacerated wound of the palm was inflicted. No bleeding of consequence occurred at the time. The hand was rolled up by some of the lad's comrades, and he remained at sea two days. Upon my seeing him, I recommended water-dressing, and a splint to be applied to the back of the hand. The case progressed favourably for three days, when some constitutional disturbance showed itself, the hand inflamed, swelled immensely, and the palm became infiltrated with pus. During the night brisk hemorrhage occurred, which soaked the bed-clothes and rendered the lad quite faint. I was sent for, and attended immediately. The bleeding was still continuing, welling out freely from a most unhealthy-looking wound. The brachial was compressed with a tourniquet, as an immediate step; the wound was wiped out clean, and explored carefully to detect, if possible, the bleeding point, but it could not be found. The case looked as unpromising a one to treat by compression as could well be conceived, from the enormous tumefaction and apparent intolerance of pressure which must have existed. I determined, however, on its adoption, and applied it in the usual way. No tightness was really required; the dressing was in every respect comfortable, the hemorrhage perfectly controlled, and *not one drop more blood was lost.* The dressings were removed in two days; the plug separated with the discharge; and in about a fortnight the wound healed. The fractured bones became consolidated; and, with the exception of a little bulging of the back, and stiffness of the fingers, which will eventually pass off, the cure is complete.

Remarks.—The special question connected with this subject requiring consideration is, Will this mode of treatment avail in all cases of wound of the palmar arch? In order to discuss this conveniently, I shall offer a few observations upon *primary* and *secondary* hemorrhage from palmar wounds, and note its application to each of these separately.

Liston says, that in cases of primary hemorrhage, "instead of trusting to pressure, which is not always well or efficiently applied, almost uniformly disappoints expectation, and leads to a severe form of inflammatory action, it is better at once to enlarge the wound, and tie the wounded vessel above and below the wounded part." This is undoubtly true as regards hemorrhage from arterial wounds generally, and, considered in connexion with the ill-effects resulting from that injudicious form of pressure adopted in the cases under special notice, had the greater weight, and recommended itself all the more forcibly; but if it can be shown that, by a simple modification, no violent pressure at the wound is necessary, and consequently that all this apprehended danger may be avoided, the argument does not apply. I am certain it may be laid down as a surgical axiom that in all cases of uncomplicated primary hemorrhage from the palm, exploration for the wounded vessel, if requiring any incisions of severity, or painful dissection, is entirely unnecessary; compression of the arterial trunks on the cardiac aspect can be easily and effectually applied, and the slightest amount only of pressure is requisite at the wound to control the hemorrhage completely.

Cases of *secondary hemorrhage* are those in which this mode of treatment would perhaps be expected more frequently to fail. Liston says of such, "The main artery is to be obstructed at a distance from the wounded part," and this expresses the prevalent and generally entertained opinion. The mode of carrying out this indication, which immediately presented itself to Liston's mind as most easy and effectual, was that by deligation of the brachial. We have seen that this practice is unwarrantably severe and highly hazardous, and further that it is unnecessary, inasmuch as all that it can accomplish may be obtained by simpler and safer means. But it may be urged that under many circumstances of this kind there is great intolerance of pressure, and that it thus may fail. This is a mere chimera, and in practice will not occur. The pressure required, in consequence of being subdivided, is really so slight in degree, the points for applying it capable of being so variously chosen, and easily shifted, that it need never be productive even of any discomfort. I unhesitatingly affirm, that the practice proposed will be found completely effectual in this whole class of cases, and feel assured that it will, however objectionable it may be to the cultivators of ostentatious surgery, eventually entirely supersede the harsher and more dangerous practice of deligation.

[*Lancet Oct.* 30, 1858, *p.* 445.

MISCELLANEOUS IMPROVEMENTS.

PERISCOPE.

Artificial Limbs.—These are now made out of hard Rubber, waterproof, flesh-color, and exact shape of the other limb, from casts taken in Plaster Paris. **Kimbol & Company,** Philadelphia, are the Manufacturers.

Vulcanite Rubber is now almost universally used in the manufacture of Surgical Instruments; for handles to knives, syringes, measuring-glasses, &c. &c. They are much neater, more durable than either gold or silver, and costs much less than bone or ivory, to speak nothing of lead and glass; and it is as cheap, or nearly so, as the tin or glass, and much cheaper than ivory, silver, or gold.

Morbus Coxania.—Drs. Bowers and Lea do not believe in the old theory of tubercules being the cause of Morbus Coxania, or Pott's Disease, but that they are the results. They are men of great experience; but we are disposed to believe the old theory, from the fact that the pus in all these sores is strumous, or white creamy pus, the characteristic of tuberculares in all parts of the body. They do not believe in the old treatment of Moxa's vesicants and the actual cautery; but recommend rest, splints, good diet and exercise in the open air. We heartily approve of the treatment, if not of the pathology.

Microscope.—A Microscope has been made in England by Messrs. Powell & Lealand, with a one-fiftieth of an inch focus. It magnifies three thousand diameters with the low eye-piece, or with a number five piece fifteen thousand diameters—this is to say, one thousand five hundred and seventy-five millions of times. We wait with impatience its development. It is said to render many things visible that could not be seen by the largest heretofore used—all being only of a focus of about the one fourteenth of an inch. I fear we will have to unlearn many things we have been taught of the elementary particles of matter.

A New Ophtalmascope has been invented, doing away with the mirror, by putting two lenses together; thus a convex lens of two inch focus near a concave lens of about nine inch focus, and to be held before the patient's eye. It embodies in itself all the reflecting and refracting elements of the old opthalmascope, and we can see the retina of the eye with this instrument, just as through an ordinary lens we see the letters in a book, or the pupil of the eye.

Pepsin Wine.—Pepsin is extracted from the rennet by cutting it up when fresh and putting it into Sherry wine, and making a solution. It should stand two weeks and be strained off, and it is ready for use. In cases of indigestion or dyspepsia, give a tablespoonful after each meal. It is also good for children whose digestion is bad, and who are poor and emaciated from this cause and diarrhœa, which is likely to follow all cases of indigestion.

Army Medical Museum.—There has been estalished at Washington, an Army Medical Museum; in which are a goodly number of specimens of operations, pathological specimens, bullets, bayonets, &c., with all old and new ambulances, &c. &c. This is a good move, and will result in much good to our profession.

The Calabar Bean.—This bean has been used with success in dilitation of the pupil, and in paralysis with expansion. It seems to be antagonistical to Belladonna. It has been proposed to treat Tetanus with it There has been obtained an alkaloid from it called Physostignian, and can be taken ¼ to ⅛ of a grain. It is applied to the eye in the some manner as atropine. See late edition of U. S. Dispensatory, 1865. This substance will no doubt take a high position as a remedy in spasmodic diseases.

BIOGRAPHICAL NOTICES.

Dalton's Treatise *on Human Physiology.*—We have received this work from Mr. H. C. Lea, Bookseller. It is beautifully printed, and the engravings are well executed; and upon the whole I think it equal to any work of the same dimensions, and is a complete epitome of physiological science. I heartily recommend it to all medical students.

A **Pratical Treatise** *on Urinary and Renal Diseases including*

Urinary Deposites, illustrated by numerous cuts and engravings—By William Roberts, M. D., Fellow of the Royal College of Physicians, London; Physician to the Manchester Royal Infirmary; Lecturer on Medicine in the Manchester School of Medicine. From Mr. H. C. Lea, Publisher, Philadelphia. This is the most concise and systematic work I have seen on these subjects. It is just issued, and brings the subject down to the present time. It is well printed, and eminently practical.

A Treatise *on the Principles and Practice of Medicine;* designed for Practitioners and Students of Medicine—By Austin Flint, M. D., Professor of the Principles and Practice of Medicine in the Bellevue Hospital Medical College, and in the Long Island College Hospital; Fellow of the New York Academy of Medicine, &c., Henry C. Lea, Publisher, Philadelphia. The best and latest work I have examined. I like his Nosology and Treatment more than any other American work. I advise every physician and student to get a copy.

Lectures *on the Diseases of Infancy and Childhood*—By Charles West, M. D., Fellow of the Royal College of Physicians, Physician to Hospital for Sick Children. Fourth American from the fifth revised and enlarged English edition; H. C. Lea, Publisher.

This is a fine practical work, but we prefer Condie's or Meig's work. It is suitable to old practitioners, and is a correct summary of the diseases and treatment of children.

Lectures on Fevers—*Merrill.*—Delivered in the Memphis Medical College, by H. P. Merrill, Professor of the Principles and Practice of Medicine. Harper & Brothers, publishers, New York, 1865.

This is a neat little volume of 235 pages. Is a practical and sensible work, and will well pay any one for its cost and trouble of reading it. The Doctor now resides in New York, and is an old and esteemed friend, and has consented to be a contributor to this Journal.

Surgeon of N. York—*Dr. Francis*,—This contains a Biographical Sketch of the following distinguished Surgeons and Physicians:

Valentine Mott, William A. Von Brower, Alfred C. Post, Frank H. Hamilton, John Murry Carcochon, James R. Wood, Lewis A. Sayres, Alexander B. Mott, John P. Batchelder, Alexander H. Stevens, Willard Parker, Gurdon Bush, John Swinburne, Julins Stephen, Thebond, Stephen Smith, and Alexander E. Hosack. Published by John Bradburn, New York.

THE
Galveston Medical Journal.

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FEBRIS TYPHUS ICTERODES, FEBRIS CUM NIGRO VOMITO—Yellow Fever.

HISTORY IN THE STATE OF TEXAS.

The first appearance of this disease in this State, so far as I can learn, was in 1833. Dr. John Tinsley and the late Dr. Jeager, of Galveston, were then living in Columbia, on the Brazos, and in partnership; the former a druggist and the other a well educated German physician. There were about sixty cases and about thirty-two deaths. This history I received directly from Dr. Tinsley and corroborated by Dr. Jeager. Columbia was then one of the principal ports for introducing goods into the country, and ships were there from New York and New Orleans. The mouth of the Brazos was the principal port of entry for the State, at that time. Asiatic cholera was also introduced that year with yellow fever, and prevailed in the fall together. There had been a great overflow in the Brazos that spring and the water was higher than ever was known before or since. Cholera again appeared on the Brazos in 1842, but yellow fever has not appeared on the Lower Brazos since, except sporadically. It was very bad in Richmond in 1853, but did not occur below that point, nor did I ever hear of a sporadic case below Richmond, and I was then living at Sandy Point, in Brazoria County. The epidemic of yellow fever in 1833, as described to me by Dr. Tinsley, was of the congestive type, and most cases died with black vomit. It was of an asthenic character. The treatment was mercurials, quinine and opiates—about every other case died. The next time the disease appeared was in 1839, of which Dr. Ashbel Smith has given a faithful account in the North American Journal of Medical Sciences, vol. III. page 213, 1839. This was a very fatal epidemic. Dr. Smith says that it prevailed on the Strand and did not cross the morass, now called Bayou, south of the city. Dr. Dickerson says it was introduced from New Orleans on the 27th or 28th of September. Dr. Smith says from the 30th of September to the 8th of October the thermometer was from 84 to 88 degrees, but on the 9th there was a norther blowing and it fell to 66½ on the 11th. "Within the fifteen hours immediately preceding the norther and the fall of the mercury, I was called to eight new cases, and I have been informed of some others. During the prevalence of the norther, I do not believe, after careful inquiry, a single new case occurred. Subsequently the epidemic reappeared in a somewhat modified form. The first fresh attack recurring, I believe, about 5 P. M. on the 11th."

He further says the disease continued until the 7th of November, when there was a slight frost, which he hoped, had put an end to the epidemic, but does not say it did, but remarks : "That although the northers prevented new cases, they were believed to be pernicious to persons seriously attacked." Galveston was settled in 1836, and no cases are reported until this epidemic, though they were in weekly connection with New Orleans. The town then contained about 2,000 inhabitants. Local filth and commercial intercourse were both present in Galveston, and Dr. Drake says the origin of this epidemic is undetermined, after quoting Dickerson, who says it was introduced from New Orleans.

Dr. Smith at first used calomel as a purgative, but abandoned it for rhubarb and senna given in infusion. Dr. Smith gives the post mortem of eight cases ; in the stomach he found black vomit and thickening and softening of the mucus membrane (always greater near the pylonic extremity), which was sometimes injected, at others a pearly white anoemic duodenum. Dr. Smith says the duodenum was less often affected than the stomach.

THE OTHER INTESTINES.—Dr. Smith observed tumefaction of the glands of peyer and he saw patches of hypereomia in various places. Black vomit was common, and in one case the color was remarkably white and contracted ; there was a deficiency of bile in all cases, but in none a structural derangement of the liver. 'The kidneys were sound in every case, the bladder was generally empty and contracted, but in one case he found it nearly filled with limpid urine. In another the quantity was smaller, with flakes of white mucus, and the entire internal coat was engorged with blood, giving it the appearance of the living members of the eyelids in conjunctivitis. In a single subject, immediately below and rather behind the kidneys, near the spine, on each side there was a clod of blood in the cellular tissue, three inches large and half as much in width. Dr. Smith found the heart sound, sometimes there was an usual quantity of yellowish serum in the pericardium. The limbs were rigid." Dr. Smith's account is the most complete history I have found of any epidemic that has yet occurred, and I have above given his special observations for future reference. In 1839 the disease also prevailed in Houston as an epidemic, and was treated by Dr. Ewing both with laxatives, baths, oil and quinine, and venesection and cathartics, with about the same success, but accords his opinion in favor of mercury. The disease again became epidemic in Galveston and Houston in 1844. I cannot find any accurate account of this epidemic and only an allusion to it by Dr. McCraven, stating that he followed the same plan as he did in 1848, of which epidemic he has given us a very good and succinct account of it as it prevailed in Houston that year. There were a few cases in Galveston in '47 and '48, but not considered epidemic.

YELLOW FEVER IN HOUSTON, 1848.

Dr. McCraven says, on the 30th of August the first case came under his notice, it was under the care of another physician and in the fifth or sixth day when he saw it. "It was a well marked case, hemorrage ensued the next day, and black vomit and death the day following." This case occurred at a boarding house, near the steamboat landing, and he saw another case in the same house which proved fatal on the sixth day. The landlord died, and his wife and two or three children in this house. Cholera made its appearance in this same house in some German emigrants just from Germany, on the 20th of September, of this same year, 18'8. (Cholera also came to Columbia in 1833, the same year yellow fever came, as I have before stated.)

Dr. McCraven further stated that the fever, during the first week of September, occurred in various other parts of the city, and in a few days more the epidemic was fully developed and general throughout the town. "It contined until after frost, very few unacclimated persons escaping, and some who had previously had the disease suffered a second attack. Several of these I had attended in 1844," says Dr. Craven, "none of them were fatal." I presume he means those who had a second attack. The deaths amounted to something over a hundred, perhaps 6 or 7 per cent. of the whole number of cases. The epidemic appeared in every variety of type, from the mildest to the most malignant, the latter was comparatively rare, the mild cases greatly predominating. He states that the disease was easily managed and that he treated about three hundred in all, and only lost seven—only losing three cases he treated throughout, being one per cent he lost under regular treatment. "Many of the cases were so mild that but for the prevailing epidemic they would not have been classed with it." He gives it as his experience that during an epidemic but few other types of fever occur. I believe this an error, and that many cases of remittent fever is called yellow fever, and one third of the cases called yellow fever, during an epidemic, are of the malarial type. Dr. McCraven says most of the children had fever and he does not believe that natives are exempted, but he has many reasons for believing otherwise ; though in young subjects, its attacks were very mild. The population was about 5,000, and of this number some 1,500 or 2,000 were attacked. The deaths amounted to something over a hundred, perhaps six or seven per cent of the whole number of cases. All I can say, these are very vague and unsatisfactory statistics, and consequently no just conclusions can be drawn from them. "Hemorrhage," says Dr. McC., "and black vomit, were more frequent than I have heretofore witnessed." This is strange after telling us he had only seven deaths in about three hundred. How is this ? Surely he must have written without thinking.

Dr. McC. says he does not consider a man a fool who believes that yellow fever is contagious, but knows of "no rational grounds to suppose that the disease was imported last August," but he had come to the conclusion "the disease was of domestic origin." The City was badly policed and badly drained; and filthy, and there was not much rain during latter part of summer, making it remarkably dry.

DENGUE COMPLICATED WITH YELLOW FEVER IN 1858.

This epidemic was complicated with dengue. Dr. McCraven says he knows very little of this strange disease as it occurred this year. "At some uncertain period of the fever or during the convalesence, the patient would be attacked with deep seated, excruciating pains, very similar to those of rheumatism, sometimes in the fingers and toes, sometimes in the arms or legs; in several cases they were general from the hips down, while the other parts of the body were exempt; in several the tebia or radius was the principal part complained of and in one it was confined to the great toe and in another the pains were universal from the neck to the feet, and so agonizing that the slightest motion was almost intolerable. They were very different from the pains which usually attend the first stage of yellow fever; more violent, more local, but occasionally like rheumatism migrating from one part to another. Towards the close of the epidemic I encountered a good many of these cases uncomplicated; most of them in persons who had, during previous epidemics, had yellow fever, and some in those convalescent from recent attacks. It then usually comes on with chilliness, attended with thirst and the pains above described, but little fever followed; surface generally moist, and temperature normal. The pains continued from one to three days and gradually subsided."

TREATMENT OF DENGUE.

"The warm bath, quinine, anodynes, were the only remedies I found available. No case proved fatal so far as I know."

Dr. McCraven believes "it is confined to yellow fever localities and prevails at the same season; often, as I have been informed, attacking the unacclimated when the acclimated are suffering under the latter."

YELLOW FEVER OF 1853.

As a continuation of the history of yellow fever in this State, we extract the following table from the Bulletin of this city.

YELLOW FEVER EPIDEMICS IN GALVESTON,
1853, 1854, 1858, 1859, 1864.

From Flake's Bulletin of the 27th of November, 1864.

		1853	1854	1858	1859	1864			1853	1854	1858	1859	1864			1853	1854	1858	1859	1864			1853	1854	1858	1859	1864
							Sept.	1,	2	5	0	0	1	Oct.	1,	5	2	2	0	10	Nov.	1,	5	2	3	5	1
							“	2,	8	7	1	0	1	“	2,	4	5	7	0	4	“	2,	4	1	6	4	1
							“	3,	8	7	0	0	2	“	3,	5	0	10	0	1	“	3,	2	0	0	6	2
							“	4,	14	8	1	0	1	“	4,	9	1	4	0	3	“	4,	3	0	2	2	0
							“	5,	7	9	2	0	2	“	5,	6	0	11	4	8	“	5,	4	1	4	1	3
							“	6,	9	17	1	0	0	“	6,	6	0	3	4	3	“	6,	5	0	4	4	0
							“	7,	4	9	4	0	0	“	7,	7	3	13	0	1	“	7,	2	0	1	1	1
							“	8,	8	15	5	0	3	“	8,	5	2	8	0	7	“	8,	3	0	5	1	3
Aug.	9,	0	4	0	0	0	“	9,	7	18	1	0	2	“	9,	2	2	6	5	2	“	9,	4	0	1	0	1
“	10,	0	0	0	0	0	“	10.	9	14	2	0	1	“	10,	4	4	10	1	1	“	10.	5	0	3	0	0
“	11,	0	6	0	0	0	“	11,	9	11	4	0	2	“	11,	3	1	6	4	5	“	11,	3	0	0	0	0
“	12,	0	3	0	0	0	“	12,	18	14	5	0	2	“	12,	6	1	10	7	8	“	12,	2	0	0	6	1
“	13,	0	7	0	0	0	“	13,	9	13	2	0	0	“	13,	1	6	6	6	5	“	13.	0	0	1	0	1
“	14,	0	1	0	0	0	“	14,	14	8	1	0	5	“	14,	5	3	10	8	6	“	14,	4	0	1	6	0
“	15,	0	2	0	0	0	“	15,	7	8	8	0	3	“	15,	2	5	12	6	2	“	15,	5	0	0	0	0
“	16,	1	5	0	0	0	“	16,	12	10	1	0	4	“	16,	8	0	10	0	5	“	16,	3	0	0	0	1
“	17,	0	1	0	0	0	“	17,	11	7	5	1	5	“	17,	5	1	10	4	5	“	17,	6	0	0	3	0
“	18,	1	8	0	0	0	“	18.	13	4	1	1	3	“	18,	2	1	8	3	2	“	18,	2	0	0	5	1
“	19,	2	1	0	0	0	“	19,	15	9	0	0	3	“	19,	9	0	6	6	2	“	19,	0	0	0	2	1
“	20,	0	4	0	0	0	“	20,	11	3	4	0	8	“	20,	4	2	6	4	2	“	20,	1	0	0	4	1
“	21,	3	7	0	0	0	“	21,	9	4	8	0	12	“	21,	7	1	6	5	3	“	21,	3	0	0	1	0
“	22,	0	5	0	0	0	“	22,	10	2	4	0	11	“	22,	3	2	1	4	6	“	22,	4	0	0	2	0
“	23,	0	7	0	0	0	“	23,	8	3	5	1	11	“	23,	0	4	9	3	2	“	23,	2	0	0	2	0
“	24,	1	4	0	0	0	“	24,	17	2	4	0	14	“	24,	6	0	4	2	2	“	24,	1	0	0	0	0
“	25,	2	4	0	0	0	“	25,	15	3	8	3	5	“	25,	5	5	4	0	3	“	25,	4	0	0	2	0
“	26,	0	6	0	0	0	“	26,	9	3	7	3	13	“	26,	2	6	2	0	2	“	26,	3	0	0	0	0
“	27,	1	7	1	0	0	“	27,	9	5	6	3	3	“	27,	4	3	4	13	0	“	27,	0	0	0	0	0
“	28,	3	8	1	0	0	“	28,	14	1	8	1	8	“	28,	7	7	7	5	4	“	28,	1	0	0	2	0
“	29,	2	9	0	0	0	“	29.	7	5	6	3	5	“	29,	2	4	5	4	2	“	29,	0	0	0	1	0
“	30,	5	9	0	0	0	“	30.	8	4	5	0	8	“	30,	1	2	2	5	0	“	30,	0	0	0	3	0
“	31,	1	5	0	0	0								“	31,	3	1	2	5	0							

Recapitulation of deaths during the epidemic of 1864: Second Texas Regiment, 31; Cook's Regiment, 20; Bradford's Regiment, 5; Elmore's Regiment, 16; Pyron's Regiment, 5; Hobby's Regiment, 2; Timmons' Regiment, 2; Terrell's Regiment, 1; DeBray's Regiment, 1; Wilkes' Battery, 14; Dege's Battery, Sappers and Miners, 3; Marine Service, 4; Signal Corps, 1; Soldiers' command, not reported, 4; Blockade Runners, 6; Citizens under 10 years, 68; Citizens over 10 years, 68; Negroes, 16. Grand total, 259.

P. S.—In the year 1853 sporadic cases of yellow fever occurred up to January 1st, 1854, but only two or three more deaths, not included in the above table.

It will be perceived from the above table that the great epidemic of 1853 commenced about the middle of August; the first death reported was on the 16th. Total number of deaths, during the epidemic, was, in August, 22; in September, 306; in October, 136; November, 81. Hero the table ends, but the paper states that there were sporadic cases in January, 1854. In this table, which is copied from the Sexton's reports, are included all cases, and about one-sixth should be off, as that is the usual amount of burials of these months when there are no epidemics. The whole amount, being during the four months, 545: one sixth off leaves 444, and number from yellow fever. Galveston then contained about 5,000 inhabitants, and of these we suppose some three thousand had it, but it is a supposition, and I cannot find any record or reports of our physicians of this year. It spread that year to Richmond, Fort Bend County. Was very bad in Houston—seven physicians alone died with it in Houston. It was at Liverpool, Brazoria County, some four deaths out of six cases. Was bad at Hockley and Cypress, where more than half died. There were sporadic cases in various other places throughout the State, but did not spread. This was, perhaps, the worst epidemic that ever occurred in the United States, and prevailed, generally, with so many facts that lead to the general belief in its infectious character. As to how or when it reached Galveston I have no information. I had just settled in the country and was living at Sandy Point, Brazoria County, but did not see any cases. After there was a severe frost I visited Houston and was there nearly a week, and while there, there were six deaths. A Mr. Hogan had returned to his father's and took it, and died A judge, from Iowa, also died at the old capitol. The boy I took with me had it after our return, as I now suppose, but I treated him at the time for bilious fever and he recovered.

YELLOW FEVER OF 1854.

This year it appears to have commenced much earlier than in '53 as we find reported on the 9th of August four deaths; this, judging from '53, would indicate that it commenced about the middle of July. There were in August 103, in September 222, October 76, November 4. Total, 305; taking off, as before 90, we have from yellow fever 215, to about 3,000 inhabitants who were liable to it. This was a large amount, considering that the year before there had been some three thousand who were exempt, from having had it the year before. This year it was generally believed to be more malignant than the preceding year. It did not spread in the country this year, nor was it bad in Houston.

YELLOW FEVER OF 1858.

We hear no more of yellow fever until 1858, four years, when we find the first case reported in the table the 27th of August, there being only two deaths in that month. In September we have 109, October 204, November 33; total 348; take 90 off for the three months, and we have 358 deaths from yellow fever, out of a population of 6,000 at that time, and of that number we may presume from our former data, that 4,000 were protected. Consequently we have 258 deaths out of 2,000 inhabitants.

YELLOW FEVER OF 1859.

This year the first case reported in the table was on the 17th of September, and that month there were 16 deaths—none reported in August—October 108, November 64; total 178; off 90 and we have 86 deaths from yellow fever, out of the number of increase of inhabitants and those that escaped the previous year.

YELLOW FEVER IN TEXAS, FROM '59 TO '64.

Again we have an exemption of five years in this city, but during that time it had occurred at Matagorda in 1862, where there were about 500 inhabitants, and 120 died. About one-half died who had it. It did not spread into the country and it was never known to occur there before and it has never been there since. It was believed to be imported by a blockade runner, which was, no doubt true. In 1863 it occurred in Sabine and some 14 deaths occurred; a few cases were reported in Houston, but none here. It was also believed to be introduced into Sabine by blockade runners. This year it also prevailed at Brownsville and Corpus Christi, but few deaths occurred, so far as I can learn.

YELLOW FEVER IN GALVESTON OF 1864.

The population of Galveston had very much changed during the war. All the citizens that were able and could leave did so. Only the poor and those whose special interest required them to remain did so, and so far as I can ascertain, there were, when the fever broke out, about 3,000 inhabitants and about 3,500 soldiers in and around Galveston. The first case reported in the preceding table was on the 1st of September, but the disease was in the city on the 15th of August. It was believed to have been introduced by a blockade runner from Tampico, Mexico. This boat had fruit on it and was visited by many of our retail dealers, and from them it spread to every part of the city during the next three weeks, and there had been at least five deaths from black vomit and one recovery. We insert a letter to the News, at Houston, by Dr. Farner, who wrote it at my request, and I also give below my own memorandums.

DR. FARNER'S LETTER.

YELLOW FEVER IN GALVESTON.

Ed. News :—I propose in as brief a manner possible, to give such facts as have come under my personal observation, with reference to the origin and spread of yellow fever in Galveston during the present season, with such other matters of interest as I may have been able to gather from the other professional gentlemen.

Previous to its introduction, our city had been unusually healthy, notwithstanding the great extent and fatality of other diseases throughout the State. For the last four years there has been but little disturbance of the soil from digging or improvement of streets, except the construction of breastworks, redoubts and fortifications. Most of these were constructed in the Spring of 1863. The Spring months had been unusually dry, with frequent sudden changes of temperature. During July and August we had heavy rains, followed by oppressive heat and sultry atmospheres.

The first case that occurred was a Mr. Graves, one of the crew of a schooner that had freighted at Tampico, ran the blockade, and landed at one of our wharves about the 15th day of August. She remained here several days before going into quarantine. During this time she was visited daily by a portion of our citizens, among the number was a Mr. Warren, who had gone on the boat and had been in direct communication with Graves. Ten days thereafter Mr. W. was attacked with a fever, which his attending physician diagnosed billious fever. On the fourth day after the attack he died with black vomit—doubtless the first victim of yellow fever among our citizens. Capt. McRea, who also visited the boat about the same time, was not taken down with the fever until the third day of September, and died on the tenth. The first night of his attack he slept with James Houston at the Ordnance office. Thirteen days thereafter Houston was attacked, and died within forty-eight hours. In about two weeks Capt. Benton, who had been very assiduous in nursing Houston, was violently attacked, but recovered. The next day after Capt. McRea's attack, he was sent to the Post Hospital, but was discharged on the 9th, and went to the house of Mr. Mabus, where he died the next day, having black vomit about two hours before his death. Mr. Mabus was an old citizen, having lived here over twenty years. He contracted the disease and died on the 20th of September; subsequently, several other cases occurred in this same house. A Miss Boden, who had been at Warren's, was attacked on the 2d day of September, and died on the 11th. During her sickness a child, aged three years died in the same house, but whether it had been subjected to any other exposure, cannot be ascertained, Miss Shrivenaugh had visited a lad by the name of Burns, who died on the 1st, she was taken sick on the 1st but recovered. Other cases occurred in the same house, and one death.

In the immediate neighborhood of these localities, sporadic cases occurred, which were gradually diffused throughout the city. Among all those that came under my observation, each and all were traceable to the fact of personal exposure to pre-existing cases, or exposure to infected localities; there may have been exception to this in the practice of others—but as Dr. Friedeman and myself, had, at the commencement, claimed that the cases were genuine yellow fever, we were doubtless more particular in tracing out the exposure that those under our care had been subjected to, previous to their attack, than those who classed the disease "congestion of the brain." Owing to the indistinguishable character, and "dissimilarity" to former epidemics that had invaded this place, much diversity of opinion existed as to its true character. Dr. Friedeman and myself having committed ourselves to the above opinion, watched its progress with peculiar intererst, and on the 5th day of September had under treatment thirteen cases of clearly marked yellow fever. On the morning of the 5th Miss Shrevenaugh had the black vomit, she, however, recovered, being the only instance of the kind that came within my knowledge, although it is stated that several others did recover.

If there had existed in our minds the least doubt of the correctness of our diagnoses, the results of this case must necessarily have dispelled them, and the gradual, persistant and fatal march from house to house, fully satisfied us that the existing cases had ceased to be sporadic, and that a fatal pestilence was already in our midst.

Having come to this conclusion Dr. F. and myself immediately reported that fact to Gen. Hawes. Other physicians, however, with equal, if not superior advantages, continued to deny the existence of yellow fever, or existence of "any symptoms partaking in the least of the character of it." Cards and editorials were published in order to "disabuse the public mind" from such a foolish thought. Notwithstanding these denials, death continued its havoc among us, claiming daily, new victims for the sepulchre, and strange as it may seem, during the first eleven days of September the report of M. Cahill, City Sexton, shows that out of seventeen interments thirteen are reported as congestion of the brain. On the 4th the epidemical character of the disease became so fearfully apparent that no further denial could be made, and hence we have no more deaths from "congestion of the brain."

In view of the many facts continually presenting themselves to the practitioner, it did seem strange to me that such apathy and indifference should be exhibited on a subject of such a vast moment, and that such a diversity of opinion should exist among those familiar with the disease. I may be in error, but I claim that any attempt to suppress the truth or conceal the existence of a terrible epidemic, is highly censurable. It detracts from the profession by lowering its proud and noble dignity, and by a loss of confidence in the integrity, or a want of ability in the practitioner. It injures the reputation of a city and brings odium and distrust upon its inhabitants.

Had the suggestions, made by two physicians who visited Gen. Hawes, been fully and candidly carried out, doubtless, many valuable lives might have been saved. This would have settled, at that early day, the character of the disease, and whether it had been propagated by a peculiar meteorological condition of the atmosphere, or infection, or contagion, or a combination of these, its acknowledgement, at that time, would have enabled hundreds, who had come here from the country, to remove beyond the sphere of its contaminating influence.

Such, then, was its origin and progress, and, as it has almost entirely disappeared, I trust that we can now look back at its "peculiarities" without any reference to former contentions, simply for the sole purpose of arriving at the truth. Although it was evident to all that a fearful malady existed, physicians had expressed their antagonistic opinions and adhered to them with a pertinacity that excluded unprejudiced conclusions at the outset. They can now inquire impartially, into all the facts connected with the disease, and report, with fidelity, the results of their observations.

In justice to the Army Surgeons, it is proper to state, that most of them were not familiar with the disease, and hence took no part in the controversy.

At the time of the introduction of yellow fever, we had a population of about four thousand, including the troops, most of whom were sent out of the city, leaving a population of from two thousand to twenty-five hundred. Of these many were fully acclimated, and a large portion, on former occasions, had the disease. Although the disease had been remarkably slow in its march at the outset, it soon assumed such magnitude that physicians generally failed to keep any record of cases. The nearest approximation that can be arrived at—the number of cases treated is about twelve hundred, many of these, doubtless, were only sympathetic cases.

Of the deaths from yellow fever, including those reported as "congestion of the brain," we have the following results to November 20th :

Whites—over 10 years of age, males 162 ; females, 31 ; both 193. Whites under 10 years of age, males 32 ; females 31 ; both, 63. Total whites, 256. Colored persons—males. 7 ; females, 2 ; both, 9. Total number of deaths, 265. Of these, there were physicians, 3 ; soldiers, 121 ; citizens 138. Physicians generally concur in the opinion that the mortality was at least one out of every four, or twenty-five per cent. Fourteen physicians were attacked, of which number three died. In Elmore's band thirteen had the disease, of which four died. Seventy-one of Elmore's regiment were treated, with a loss of seventeen. These, perhaps, form the best basis for a correct conclusion of its mortality.

The prominent symptons were augmentation of the pulse, irritability of the stomach, pain in the limbs and spinal apparatus, great tendency to congestion of the head, injected conjunctiva, membraneous formation on the gums, nausea and sometimes vomiting ; the general character of the tongue was white with red edges, which, during the progress of the disease, generally assumed more of the characteristics of our low grade of typhus. Thus then the symptoms do not materially differ from those peculiar to other epidemics of the same disease. The duration of the fever, however, ranged from one to seven days and in some instances, even longer. In the ordinary course of yellow fever, patients are frequently discharged on the third or fourth day, while in this most of the deaths occurred on the seventh or eighth day. The rapidity with which it assumed the phases of inflammatory, typhoid and congestive, gave it a marked peculiarity ; convalesence has been invariably tardy, unusually so ; though few, if any cases of organic diseases of the lungs, liver, spleen, or other internal vicera, have occurred as sequelæ.

Among the troops removed from the city at the commencement of the epidemic, but few cases have occurred, and these were traceable to their persistency in visiting the city. While at South Battery, Fort Scurry, where the rule of non-intercourse was strictly adhered to, not a single case occurred, although these points are low, damp and unhealthy, surrounded by stagnant pools and subject to whatever influences might arise from the disturbance of the soil, and in close proximity to several fatal cases.

Numerous cases have come within my knowledge of persons leaving the city, after having contracted the disease, where the disease run its course with the same virulence as in the city, but invariably terminated with the individual subject, and was not communicated to other occupants of the same house, although they remained within a few miles of the city. Hence the inference is conclusive, that there must be certain atmospheric constituents, combined with local visitations, which might remain innoxious through all time, without the introduction of an exciting cause to rouse it into action, like the "waves after a storm, not dead but sleeping." The introduction of the case from Tampico, was but the spark of fire applied to the magazine already prepared for the explosion, it found a kindred atmosphere and ample infected matter to give it new life and wake it into a fearful pestilence.

W. H. Farner.

I see that my notes say Mr. Adolphus Flake lost his son Leopold Henry on the 30th of August. This was one of the first cases believed to be yellow fever. On the 1st of September I was called to see Edwin Brock, a cousin of this child, who had high fever with congestion of the brain, he appeared to improve and his fever left him on the night of the 2nd, and became calm and quiet and wanted to eat. I permitted him to have tea and toast bread with butter, of which he eat heartily and in two hours he had a return of fever and began to catch at his throat and scream; this raised my suspicions and I began to think it arose from yellow fever—these screams and catching lasted, and about ten o'clock he began to vomit up black coffee looking stuff, and died at 12 M. This was the first death I saw from the disease, but at the same time, there was a patient, a Mrs. ——— that was also dying from black vomit. Two days more the Lutherian minister, the Rev. H. Bohlmenheimer died. He had been to see the little child, Edwin Brock, he was taken sick and also Mr. Flake's son. At this time there was an editorial in the Bulletin, to wit: "Reports of existence of yellow fever in this city continue to circulate. Why do not the physicians meet and settle this grave question?"

Up to this time it was not recognized by Drs. Nagle, Campbell, Holland and Labadie, all old physicians of Galveston and who had seen much of yellow fever. I had not, but I said it was not congestive malarial fever and it could be nothing else but yellow fever; but from this date on there were no more disputes, all recognized it as yellow fever and treated it as such. It continued to increase, as the table of deaths shows.

Gen. Hawes, commanding, sent the troops out of town, the prisoners up to Millican, but the disease followed them—on the 14th of September I took it myself. In the forts, where there had been no cases up to this time, there were established rigid quarantines and not a single case occurred in their camps, only those who came to the city had it, those in the different quartermaster's departments suffered. There were in my regiment (cook's) 63 cases and 21 deaths in all.

On the 16th of September it was reported to be rapidly spreading in Houston. There were fifteen deaths on the 24th of September. On the 3d of October we had quite a change in the weather, and consequently a decrease in the number of new cases and also deaths. October the 12th the Houston papers report a great increase in the number of cases—200 supposed under treatment. On the 11th of October, Dr. Sims, of Mobile, a son of Dr. Marion Sims, arrived here from Havana and died on board of ship with the fever. Gen. Hawes was taken with it on the 3d of October but recovered. Lieut. Thomas P. Hebert died on the 17th with the disease. On the 18th we had a norther, which nearly stopped the epidemic; but it began in five days to rage almost as bad as ever, until the last of the month, when we had another cold spell which nearly stopped it, and Flake's Bulletin of November 3d, says: "We consider the yellow fever epidemic at an end. The cold weather encourages us to hope of no new cases will occur," but they did occur generally until November 23d, when we had a heavy frost; after that I knew no new cases occurring, except some relapses and those soldiers who had gone home on furlough and returned, and found their friends with it. Of this class, one case I knew to take it on the 27th of December and died on the 5th of January, 1865, and one relapse, Lieut. Maddin, died on the 1st of January with black vomit. He threw up quarts of black vomit. He had the disease some six weeks before and got up, went to Houston, got on a spree, and returned with fever and was treated for bilious fever, by Dr. L., of this place. He sent for me the day before he died, but he commenced to vomit in one hour after I saw him and died next day.

This year it did not spread in the country; it only spread to Houston and Millican—to the latter place it was carried by the guard and prisoners from Galveston—and they had four deaths. Several ladies died in the country that left Galveston when they found out that it was yellow fever, but no one took it from them that I have yet heard of.

PATHOGENY.

As to the generation, production and development of yellow fever, the reader will have come to my conclusion from the preceding history. The facts indicate that it was introduced here every year; and, if there was an exception, it was in 1854, when it commenced so early and remained so late. It is more than presumable that it did not die out during the whole winter, as it was very mild and even where I lived, sixty miles west of Galveston, I saw cotton in bloom from old stalks in January, hence I conclude it is always introduced and remains until a cold freeze comes to kill it out. That it is checked by every change of 10 degrees of the thermometer was very evident in '64, but that a simple white frost will not kill it, or stop its infection in houses where it has been is fully demonstrated. That the disease remains a long time in the system after one gets up, is evident. Several relapses I knew after six weeks that proved fatal, and several recovered from three relapses. I had jaundice after I got up—which came on me three weeks after I thought I was perfectly well. When this went off me, it went off in a sweat like yellow fever, and smelt like yellow fever. Several other persons had jaundice as a sequala; but all, so far as I know, recovered. It attacks all ages alike as the table for '64 shows. Children a month old had it as bad as the new-comer through the blockade. There was no difference in its severity as to age, temperament, nativity or color, so far as my observation went, and the table sustains this opinion. Aclimation, so far as I could see, had no control over it. Mr. Westcott and Miss Phœbe, his daughter, had been living in Galveston for over twelve years, and they were both taken very bad, and both died. Many children born here had it, and sixty-three died—equal to the adults out of the army. So many children had it, that it was called at first the children's epidemic. It appeared in every part of the city about the same time, but remained mostly in the houses and soldiers' quraters where it first commenced.

ÆTILOGY.

Its cause is specific, whether animal or vegetable, aerial or telluric. It must be brought in direct contact with the person ; it does not travel any distance through the air ; it will not affect persons unless in an atmosphere peculiar ; not prevail only where a number of persons are congregated together ; its cause is transported in blankets, clothing and bedding that the patient may have affected ; it has many habits of Asiatic cholera and spreads in the same way, but is limited by cold and by the number of individuals. I believe the cause is amimalcula, and think its characteristics cannot be explained on any other theory. The cause is like musquitoes—prevails in warm weather and dies in cold. Confined to districts of standing water, cannot go far from them and live. The cause of yellow fever lives on the ejections from the human body, and where these are in large quantities, and heat and moisture sufficient, it can be introduced. The hydrants of Philadelphia and New York have banished it from those cities, and will no doubt in time banish it from New Orleans. The city is washed out, the effete of the human body is washed off, and the animalcula has nothing it can live on, so does not increase, and when the disease is carried into remote districts, where there is no concentration of foecal matter it does not spread. When all our cities are well drained and well washed out every day ; we will hear no more of yellow fever.

PATHOLOGY.

It is evident that it is a blood disease. That the blood becomes fibrinated, the globules swollen up, and from these causes we have in the weakest organ, congestion. If the brain is feeble or has been too much worked, there will be congestion of the brain at once, and the membranes will become inflamed and the substance softened, and the patient will die comatosed. If the lungs are weak they will be affected and there will be heavy respiration and congestion of the lungs, which, if not relieved, will result in death with a hepatized lung.

If the stomach is involved there will be immediate nausea and vomiting, and, unless relieved soon, death will follow from black vomit. I was one of this class. In twelve hours after I was taken I was vomiting up blood and water This is considered its worst form, and not more than one in twenty thus taken recover, but by prompt cupping I was relieved, so in twelve hours more I was comfortable, and could breathe free and without pain when, before I was cupped, I could not bear my drawers buttoned around me, and the pressure of my diaphragm in breathing gave me great pain. The stomach becomes involved in most cases, unless relieved, and death results from black vomit.

The liver is often involved, when it will be gray or ecchimosed, with black spots like black vomit. Sometimes the bowels are specially involved, and diarrhœa is the principal symptom, and will result in hemorrhage from the bowels and death from aemic ejections of grumoid, or stuff like black vomit.

The kidneys are affected in almost all cases. No urine or scarcely any is secreted, the bladder is generally empty, and the kidneys injected and ecchimosed, the genital organs are excited, patient has lubidinous dreams and often priapism.

The nervous system is affected in all cases ; patient is tremulous and weak ; the skin is clear and red, not yellow. This is a great mistake and deceives the inexperienced—not more than one in ten have any yellowness before black vomit sets in, and even then it is more of a livid yellow than olive yellow. All inexperienced physicians look for yellowness of the skin, which is the exception. In severe cases the adnatæ of the eyes are a little yellow, but more red and injected than yellow. The tongue is often clean and red at the edges, but it soon assumes a typhoid type with brown fur. The skin when yellow does not affect the urine, which is usually clear and limpid when secreted in its first stages, but becomes red in a few days if inflammation sets in. This is a diagnostic symptom of considerable importance, as the patient, though yellow, will not stain his shirt with his urine. If it is jaundice or a high grade of billious fever, the urine will invariably stain the shirt and often deeply.

Of those taken in small towns and villages more than one-half have died ; in large cities, where its treatment is well understood, about one in three die; in small cities about five in six. They die with stomach symptoms oftener than any other—two out of three; head symptoms, one-tenth; bowels, one in eight; and from all other causes, the remainder, five-twelfths, die.

The cause of death appears to be the production of grumoid, or, as we call it, black vomit. This, as ejected pure from the stomach, looks like coffee with milk in it. No fine lumps in it; no tinge of green; often mingled with matter in which it sinks to the bottom. I have never seen anything like it, and once seen cannot be mistaken, unless mixed with water, food or medicines. The stage of black vomit is almost hopeless, but there were at least ten recoveries from it during the epidemic of '64. I saw two myself, and have every assurance of eight others. Dr. Labadie reported nine recoveries out of nineteen of black vomit; but I do not think his diagnosis was good, as he called me, with several other physicians, the next summer, to see a case of his that he pronounced black vomit, but proved to be only black bile, and the patient had been an old yellow fever nurse. She recovered also; so I do not think, from all I can learn, more than three of the doctor's cases were genuine black vomit. It is certain that more recovered that year from black vomit than ever did before whether of the treatment or not. This is encouraging, and we may hope to cure this stage. This black vomit is the only reliable symptom of yellow fever; all other symptoms may be found in malarial fevers of a congestive or typhoid type, and no one can be certain of the disease until he sees this. There are a great many things that will assist: The screams of the patients; the frightful look; the red skin; the red-edged tongue with white fur; the quick change after twelve hours to a brown typhoid type; the injected skin; red or yellow adnatæ; the want of a sallow color; want of dropsical appearance in cases of enlarged spleen. But yellow fever may occur in a patient with enlarged spleen and thereby complicate the diagnosis. Yellow fever is a fever of one paroxysm—one chill—which may last for only a few minutes or for six hours, as it did in my case, with rigors running up and down my back. Then fever comes and may last from twenty-four to thirty-six hours, when it will go off. Fever seldom very high until inflammation sets in, and then it will, ordinarily, last eight days. It is a self-limited disease and will go off of itself, unless some of the vital organs become involved and death is produced by inflammation or softening of the tissues, brain or stomach. It never or rarely ever occurs more than once, though you often hear persons say that they have had it twice.

This I account for on the ground of difficult diagnosis. Often they have remittent fever and it is called yellow fever, as Dr. McCraven says, it is common to call all diseases yellow fever when there is an epidemic of it. Hence, we often hear the Houston physicians say they cure a larger proportion of cases than anywhere else. Houston is notorious as a chilly place, and all its citizens go more or less in the country, and there take fever and it is called yellow fever, unless the patient is known to have had yellow fever. There was not, so far as I am aware, a single case of recovery from black vomit, in which patient had a second attack, and I do not believe one ever has a second attack of yellow fever.

All persons are liable, but all do not take it at the time of their first exposure who take it afterwards, and some few appear not to be liable to it, who have lived for years in its district and have never had it.

THERAPY.

Its treatment should be as varied as the manner of its attack. No irritating medicine should be given, just as the stomach is the greatest sufferer. During the chill, patients should be put to bed, well covered; and brandy or hot teas—orange leaf tea, pepper tea or sage tea, may be given. These should be discontinued immediately after the fever rises, and cool drinks allowed, if vomitting or nausea is present, cupping over the stomach or sinapism should be used according to the judgment of physician. If there is much soreness, cupping freely (this remedy relieved and no doubt, saved me) should be used, and if soreness continues apply a large blister. Move the bowels slightly if there is anything in the patients stomach, or if the patient is taken soon after eating. If the brain is involved and the patient delirious, use hot baths to feet and body, and ice to head, blister over cerebullum. When there is hemorrhage from the bowels, injections of tonics, mustard over abdomen and tincture of iron internally ; fifteen drops every hour.

When urine is not secreted, give a table spoonful of sweet spirits of nitre, every three hours in a large quantity of water, if patient is not sick at stomach; but little, if sick atstomach—give enough to keep it from burning. If the skin is very hot sponge it with tepid water ; give ten drops of aconite in a little water every two hours. If the head or liver is involved give the following :

Hyd. Cbl. Nitis.
Qui. Sulphatis.
Opii. Puveris aa. ix grs.
M. F. Chartas, No. 3.

One every three hours. This was much the most successful prescription I saw tried, and appeared to do good in all cases where there was high fever and where the tongue assumed a typhoid type.

Where black vomit has set in, use tincture of chloride of iron, as for hemorrhage from the bowels; blisters to the stomach and injections of beef tea, every four hours, to sustain patient and prevent the decomosition of blood. Creosote was a favorite remedy and was principally relied on in the two cases I saw that recovered. Some give as high as six drops every two hours in gum water, but the usual doses was from one to three drops every two or three hours. This last is often given as a preventive and I think I saw several cases cured by it. The chlorine mixture was relied on by Dr. Labadie, and he attributes his cures to it. He says he perseveres with it, and mostly relies on it in these cases; other physicians tried it here, and it has been tried extensively in New Orleans, but with no encouraging success. It is composed as follows, and given as directed in prescription. It is certainly worthy of further trial, but should not be alone relied on.

Acidi Hydrochloridi.
Potassæ chloratis.
Aquae.

A tablespoonful every two hours, so long as the tongue is white or much coated.

I will close the treatment with a few cases that I attended.

SEPTEMBER 1ST, 1864.

First Case—Edwin Brock, 2 years old; small doses of mercury and Quinine with aconite; three drops every two hours.

2d September—Continued the same, fever broke—ate butter and bread, drank tea; was conscious and appeared well. Two hours—12 midnight, got worse; cried and screamed, looked frightened. Put blister to nape of neck, applied cold water to head; increased in screams—began to suspect yellow fever. Gave acomite and nitre.

Aconiti Tinc. x gut.
Spiritl. Nitri Dulcis, iii oz.
Aquæ, i dr.

S. Teaspoonful every hour. He continued to get worse. At daylight the 3d, gave vi. grs. quinine; became worse, began to vomit grumous stuff, died at 12 M. No change in the color of skin perceptible.

2. Mr. Johnson, Ætatis 40, German; was a boatman, came from

his boat in Bay with fever ; sick two days ; very yellow, like jaundice, says he had jaundice before ; very feeble, but conscious. Gave him :

Hydr. Chl. Mitis.
Opii it Ipecac Pulveris.
Quinæ Sulphatis, aa. ix. grs.
M. F. Chartas, No. 3.

S. One every three hours.

September 5.—Better, had no fever ; gave quinine pill every two hours until six were taken. Tea or coffee as much as he will drink and plenty of cold water.

3 o'clck, P. M.—Found him lying in south door in his drawers ; pulse nearly gone, skin cold, sick at his stomach. Assisted his wife to lift him into bed ; gave him a glass of brandy, covered him up well and gave the following through the night :

R. Creosoti, xx. gut.
Spiritis Vini Galici, iv. oz.
Spiriti Nitri Dulcis, i. dr.

Tablespoonful every hour.

September 6.—Better, to my surprise, for I expected to find him dead. Continued the mixture, urinated freely and it was clear and limpid. No stain on shirt, continued to mend, and on the tenth day was quite natural ; yellowness left him, did not relapse.

3. Johnny Hall, son of T. M. Hall, Surgeon of Mann's regiment.

September 12.—Saw him with his father. Had been complaining for several days. Had a chill about nine o'clock which lasted him until I reached there at 11 o'clock. Pulse feeble and easily compressed, respiration difficult and laborious, skin cold, face livid, lips livid, and everything indicated disolution. Rubbed mustard and brandy all over him. Put large mustard plaster over stomach and chest. Gave him brandy to drink with a small opiate. 2 P. M., had reacted, was warm and sweating, could breathe better, Gave ten grains of calomel in two doses.

5 P. M.—Saw him, with Drs. Campbell, Farner and Francis. The most of them believed it was only a congestive chill, but I contended it was yellow fever, with congestion of the lungs. All agreed that he needed nothing more but to let him alone under the medicine he then had.

September 13.—Better, reaction complete. Gave quinine xii. grs. in six doses, better in evening ; some fever but not high.

September 14, A. M.—Fever—gave more quinine with oil and turpentine. 5 P. M., doing well. I did not see him any more as I was taken sick that night myself, at 8 o'clock, P. M.

4. I was taken at the counter putting up a prescription.. I felt weak and chilly ; had drank some coffee at three o'clock and could belch it up. I went to bed and covered up with two blankets ; took tablespoonful of brandy every hour until all chillyness left me, which was about midnight, when fever rose went to sleep, slept some two hours, awoke sick at my stomach commenced to vomit water ; continued to vomit every hour until daylight, several times specks of blood. Stomach swelled and painful ; drawers had to be loosened. Breathing pained me in my stomach. Had took some castor oil when I commenced to vomit, at 2 o'clock A. M. Was well cupped over the stomach ; sent for Dr. Campbell, but he found me cupped, did not order me anything ; directed me to be kept in bed and to have plenty of cistern water.

8 P. M:—Soreness of the stomach gone, have not vomited since I was cupped, felt comfortable.

September 16.—Had some fever but milder. Had occasional eructions of gas from stomach. Not sick, perspired free, was kept too warm and was not allowed water enough ; suffered from thirst and for want of air. Took powder, carbonate of soda, one-eighth grain of morphine.

September 17.—No fever, feel well. Took some coffee and wine whey.

September 18.—Better, was ordered sponge bath-with warm water, with a little brandy. Vinegar was used instead of brandy, under protest by me, but could not help it, nurse would do it. Got cold and colder, almost chilly, up to 5 P. M., when I insisted unless I was again sponged with brandy and warm water I would undoubtedly have a chill, which was done and hot brick put to my feet, but I did not get warm until midnight. Continued to improve after this until the 22d of September, when I got up went to my case and arranged my books, become suddenly faint and had to crawl to bed. Come very near fainting, had a slight flush of face but it passed off during the day. I continued to mend and went out on the 1st of October to see a patient and got sprinkled with rain. Did not feel well next day and lost my appetite. Saw my urine was much sallowed, took quinine and drank syrup of sarsaparilla, became jaundiced and continued to get worse, until about the 1st of November, I went down the Island to Col. Hall's and stayed two weeks, came up relapsed. Took everything, Nitric Acid, Sulphuric Acid, Gentian and Columbo, Benzoric Acid and Bi-Carbonate of Soda, but nothing done me any good. I continued to get worse until the 12th of December, when I went home to Columbia, there I improved and returned on the 24th well.

Case 5.—William Powell, Ætatis. Taken September 9th, had chill at nine, saw him at ten, gave him Quinine, Dovers and Colomel powders. Delirious at 2 P. M., did not know me; ordered mustard to feet, cold water to head, and powders to be continued.

Sept. 10.—Better; is conscious; fever still high. Gave aconite, ten drops every three hours. Dose of castor oil.

Sept. 11.—Fever gone; is hungry. Ordered soup and coffee with light bread.

4 P. M.—Called to see him; looks well; sitting up on his pallet. Has eaten four large sugar cakes and a hot dinner. Was very uneasy, and scolded him for his imprudence.

Sept. 12.—Better—says he is well. His dinner did not hurt him. Told him to keep still and be more moderate in future. Got well without a bad symptom.

Case 6.—Mr. ——— Aetatis 18; laborer in Quartermaster's Department.

Oct. 1.—Taken with chill at night; has high fever. Gave him calomel, dovers and quinine powders. Aconite.

Oct. 2.—Still has fever; red-edged tongue; very nervous. Gave castor oil.

Oct. 3.—Fever gone; is better; continues to improve; on 10th saw him on horseback in a sprinkle of rain.

Oct. 12.—Called to see him; again had had a *chill.* Has high fever—gave same treatment as before.

Oct. 13.—Fever continues. Blister stomach; gave aconite and spirits nitre.

Oct. 14.—No improvement; fever still continues; has vomited water and some bile.

Oct. 15.—Give calomel dovers and quinine.

4 A. M.—Delirious; vomits occasionally; has hiccough. Died that night, comatosed.

I have given these cases to illustrate the various types that occurred in my own practice. I saw many cases of a typhoid type under other physicians, but I did not treat any alone myself. The first case illustrates those cases where the head and stomach are involved and died from black vomit. Case 2, (Johnson) illlustrates cases where the skin is colored yellow, which was the exception in this epidemic. It shows, also, that cold and exposure are not so fatal as believed. Case 3 (Powell.) Pure case of head symptoms—shows that imprudence in eating is not always fatal.

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[MONOGRAPH FROM DR. BOZEMAN OF NEW YORK.]

Application of the Button Suture

TO THE

TREATMENT OF VARICOSE DILATATION OF VEINS.

Varix, scarcely need I say, has engaged the attention of surgeons since the time of Hippocrates to the present day. There are, indeed, many living surgeons, whose names I could mention, commencing with those of Sir Benjamin Brodie and Valpeau, who have paid special attention to the subject, and who, as is well known, have presented it in all its bearings. Had I the time and inclination, it would be interesting to set forth the views of these eminent teachers, as to the causes and pathology of this disease, before entering upon the treatment; but as this part of the subject is treated so fully in every systematic work upon surgery, I shall pass on to the latter, with the object of offering a few practical remarks in reference to the employment of silver ligatures.

In calling attention to this principle of treatment, which, so far as I know, has not been done heretofore, I appeal only to a few results, based upon my own experience.

Let us, then, first inquire, what are the objects of an operation in the radical treatment of varix ; and what the dangers attending such an operation ?

The treatment, according to the best authors upon the subject, is divided into palliative and radical. Every one knows in what consists the former. The latter which has for its object the obliteration of the affected vein or veins, is generally, and very justly, too, viewed with great circumspection, because the operation, though simple in its execution, is liable to be followed by consequences sometimes highly disastrous to life. Phlegmons, erysipilas, purulent abscess, phlebities, etc., are not uncommon results, and we are always taught to consider well the chances of their occurring, before deciding on any operative procedure.

Various have been the plans suggested of attacking the vein, as best suited to the end in question, and least liable to the dangers above stated ; namely, acupuncture, incision, transfixion, compression, section, resection, actual and potential cautery, simple ligature, twisted suture, etc. All these methods have had their advocates, and their advantages pointed out. While some have long since fallen into merited neglect, others have been maintained in practice, and are the established procedures of the day. Of the latter I may mention the subcutaneous section of the vein, the simple ligature, the twisted suture, and the potential cautery.

Without stopping now to inquire into the claims of these several methods, which are familiar to all, I come at once to the object of our remarks ; namely, the adoption of the silver ligature or button suture method.

The idea of the above plan of treatment occurred to me several years ago, knowing as I did, from experience, how little irritation followed the use of silver sutures. The ill consequences of the operation usually had recourse to, I thought, might be obviated by this means to a very great extent, and the life of the patient thereby be less endangered. It was not, however, until the early part of last year that I adopted this principle of practice.

The three following cases I adduce in support of my views :

Case 1.—I state this case from recollection, my notes having been mislaid. The subject was a negress, the mother of six or eight children, aged about fifty, and rather delicate constitution. She stated that the enlarged condition of the veins of one of her legs had existed for several years, and now and then, especially after standing any considerable time, she suffered much pain from their distension, which would frequently force her to take her bed.

Upon examination, I found the sephena interna, and a few of its branches above the ankle, the seat of the difficulty. The dilatation of the vein extended as far up as the middle of the thigh. At a point just below the knee, the vein was very large and tortuous. There had never been any ulcer of the leg. The skin was very smooth and showed no indications whatever of disease.

All the palliative means had been tried effectually, but with no permanent good. The radical treatment, therefore, was the only alternative left me. In deciding now upon a plan, I determined to employ the silver ligature at a few points, and see what the result would be. Accordingly after due preparation of the system, the operation was performed.

For the operation the patient was placed upon her back, and the ligatures of a suitable length then introduced with a curved needle. (I prefer a needle with a short curve, held in *a porte aiguille.*) I entered the point of the needle through the skin as far in front of the vein as I could to allow of its being carried beneath the latter, and out at a corresponding point in the skin. It was my intention, at first to completely encircle the vein, and in that way to have the two ends of the wire to pass through one opening in the skin ; but this I found to be entirely unnecessary. The narrow bridge of skin intervening between the two perforations, as above introduced, is not at all in the way of effecting constriction of the vein.

The ligatures, five or six in number, having been introduced, I next tied the ends of each over a couple of pieces of bougie in the same manner recommended by Mr. Erichsen in his use of the silk ligature. I was not pleased, however, with this arrangement. I found that I could not tie the wire sufficiently tight to insure occlusion of the vein, without the risk of breaking it. I arranged all of them in this way, however, and put the patient to bed. The after treatment consisted in quietude, elevation of the limb, light diet, etc.

The patient went on remarkably well—had little or no fever. The swelling and pain around the several points of the ligatures were very slight. On the ninth day, I removed the ligatures ; found the most of them quite loose, and the bits of bougie, over which their ends had been tied, almost ready to fall out of place, thus showing that the vein was cut through. The skin on which the bits of bougie rested was ulcerated at several points, which I had occasion to regret. The patient was kept in bed several days longer and then allowed to get up. The hardness, now, along the course of the vein, as far up as the ligatures had been used, proved pretty conclusively that consolidation had taken place. After being up for some time the patient expressed herself greatly relieved, and desired to have the cure completed, which I promised to do, should she be troubled again.

Case 2.—Jane, a colored girl, aged about thirty-four, the mother of four children, large and stout, was sent to me the 21st of September last, for the purpose of treating her for an ulcer on her right leg. She stated that she first became pregnant in her sixteenth year, and that just before confinement the veins of her right leg became enormously enlarged. After labor, "says she had milk leg," from which she did not recover for several months. The veins in this leg remained large. Two years afterwards she became pregnant the second time, when the veins in this leg again increased very much in size, and caused great inconvenience. After the birth of her child they diminished somewhat in size, but still caused some annoyance, especially after standing a long time. Soon after this she received a slight scratch on the front part of her leg, three or four inches above the ankle. This resulted in the formation of an ulcer, which, after attaing a considerable size, gave rise, to profuse bleeding. This ulcer went on increasing in size for five or six years. A physician, then, after a long time, succeeded in healing it up, but it remained so but a little while. She says that as soon as she began to walk about again, the newly formed skin gave way, resulting directly in an ulcer as large as ever. In this condition she remained until sent to me.

Upon examination, I found the ulcer situated as above stated, and half the size of my hand. The whole leg was very much swolen, and apparently all the superficial veins were dilated. The main trunks of the saphena interna and externa, were quite large and tortuous. The former, just below the knee, was so large and tortuous that its course could not be traced. Above this it was not so tortuous, but largely dilated nearly up to saphenous opening. With this condition of things I thought of nothing short of the radical treatment. As a preparatory step to this, however, I determined to reduce the swelling of the leg, and to cure the ulcer, if possible. The patient was accordingly placed upon her back, and the limb bandaged up to her groin, twice a day. The ulcer was dressed with the following salve at the same time : ℞. Pulv. Rhei. i. dr., Pulv. Opii. gr. x., Ung. Cetacei, i. oz. M.

Under this treatment the swelling rapidly diminished, and in the course of three weeks the ulcer was completely cicatrized.

The patient I now considered in a good condition for an operation on the veins. I determined to limit my procedure only to the largest ones below the knee, reserving the saphena interna, above this point, for a subsequent operation. Five silver ligatures were accordingly introduced, as in the preceding case, they being principally applied to the sapheua interna. This being done, I next proceeded to adjust them. Being satisfied with the bougie arrangement in the preceding case, owing to the ulceration of the skin occasioned by it, I determined to effect adjustment this time on our button suture principle, in order to ascertain the result. With this view the two ends of each wire, commencing with the lowest, were now put together and passed through the hole of our *suture-adjuster.** These being firmly held between the thumb and forefinger of the left hand, the instrument was slid down upon them until complete constriction of the vein was effected. All the others were arranged in like manner. This being done, a disk of lead with a hole through its center, was put on the wires and slid down to its place. Upon this a shot was next slid down. This now being grasped by a pair of forceps, and held firmly against the plate of lead, the requisite amount of force for the constriction of the vein was then applied to the ligature, and thus secured by compressing the shot upon it. The ends of the wire were next cut off close to the shot, which completed the operation. The patient was then put to bed, the limb elevated, and quietude enjoined. The case progressed well ; no fever occurred and there was but little swelling or pain. Some of the sutures I removed on the eighth and the remainder on the ninth day, after the operation. The patient was kept quiet a few days longer, and then allowed to get up. There appeared now to be pretty general consolidation of the veins upon the front and inner side of the leg. A large bunch just below the knee was quite hard. The patient, after going about for several weeks, experienced so little inconvenience from the enlarged veins remaining, that I concluded not to perform another operation, for the present.. It has now been about seven months since the operation, and the greater part of the time this woman has been employed as cook, washer, and ironer, using no laced stocking or bandage.

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*Gross' System of Surgery, vol. ii, fig. 568, p. 1047.

A few days ago I made an examination of the affected limb, and found it the same size of the other. The cicatrix appeared firm, not showing the least indication of breaking at any point. There are a few branches of the saphena externa, and the trunk of the saphena interna, above the knee still dilated. It is my purpose to operate again upon the case, and complete the cure.

CASE 3.—Elias Smith, plasterer, aged nineteen, of medium stature, and rather sparely built, was sent to me in February last, by my friend Dr. J. C. Batchelor, of this city, to have his leg examined, with a view to an operation. He stated that ever since he could recollect, there had been an enlarged condition of the vein on the inside of his right leg, and of late it seemed to be increasing in size. He said that it gave him no pain now, or inconvenience, but he feared it would, and ultimately might force him to give up his trade.

Upon examination, I found that it was the saphena interna which was involved, the dilation extending from the ankle nearly to its passage through the fascia lata. At a point just below the knee the dilatation was greatest, and here the vein was also very tortuous. Having considered the case in all its bearings, I took the view that the man was a laborer, his occupation requiring him to be almost constantly upon his feet thereby increasing the difficulty, and that, if the disease could be radically cured, now was the time to attempt it. Everything favored a satisfactory result. Accordingly, after such preparation of the system as was necessary, I proceeded to perform the operation in the presence of Dr. Batchelor, Dr. Frazier, of Arkansas; Dr. Gilmore, of Mississippi, and several medical students.

The two preceding cases, it will be recollected, were operated upon in the recumbent position. This patient I placed in the erect—and I now greatly prefer this position, for the reason the vein is distended and the needle can be entered and carried around it with more facility. I introduced five ligatures, two below, one opposite, and two above the knee. This was easily and quickly done. The patient was now made to lie down, in order that the vein might be emptied of as much blood as possible before adjusting the ligatures. The lowest one was arranged first, and the others then in regular succession. The disk of lead and shot were next slid down and secured, as in the preceding case.

After-treatment the same as heretofore pointed out. The patient had no fever. On the seventh day I removed two of the sutures, and on the ninth the remainder. On the fourteenth day after the operation the patient went to work, experiencing no inconvenience from it whatever.

I examined this case a few days ago, it being nearly three months after the operation, and I was astonished to find that the obliterated vein had so nearly disappeared. It could be seen only at one point, just below the knee, and here it felt perfectly hard, and was quite movable beneath the skin. The consolidation had extended entirely up to the saphenous opening. The result could not have been more satisfactory.'

Varicocele.—Being so well pleased with my first application of the silver ligature to enlarged veins of the leg, I felt very anxious to make trial of it in varicocele, believing that it would have advantages over the ordinary methods pursued.

It was not long before an opportunity offered. A gentleman of Donaldsonville, in this State, aged about thirty, consulted me in reference to the disease in question, which he said he had had since he was fourteen years old. An examination proved his statement, as to the existence of the disease, to be correct. It was, as is almost always the case on the left side. Associated with it was an enormous elongation of the scrotum. It hung down, especially on the left side, nearly to the middle of the thigh. An operation, therefore not only for the varicocele, but for retrenchment of the scrotum, was called for which I performed in the order mentioned. That for the vericocele was performed upon the button suture principle, the ligature being introduced in the same manner recommended by Prof. Gross, in the use of the silk cord.* In this way the veins were completely encircled, and both ends of the wire left hanging out at the same opening in the skin. The ligature was next adjusted, and the button and shot secured as in the second and third cases of varices. The patient was now put to bed, and the scrotum raised up and supported with a suspensory bandage. Cold water dressings ordered. There was the usual amount of swelling below the seat of constriction, and on the fifth or sixth day, considerable pain. On the seventh day the suture apparatus was removed, when consolidation of the veins appeared to be complete. After a few days the patient was allowed to get up. The next thing was to retrench the scrotum, which, after the patient began to walk about, was as long as ever. This operation was performed in the usual way, only a couple of small arteries requiring to be tied. The edges of the wound were brought together by a number of uninterrupted silver sutures. The patient was then put to bed, and the parts supported by means of a suspensory bandage. Cold water dressings directed.

A day or two afterwards hemorrhage took place from a small artery, and before it could be controlled the patient lost a considerable amount of blood. Excepting this he got along remarkably well. On the seventh day I removed the sutures, when union of the parts appeared complete, excepting at one point, where the edges of the wound had not been closely approximated. This filled up in a few days, however, by the granulating process, and the patient was then discharged cured.

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*Op. cit., vol. ii, p. 956.

I examined this case a few weeks ago, it being about eight months after the operation, and the condition of the parts could not have been more favorable. The veins all appeared to be completely occluded, and reduced to mere threads. Our patient expressed himself entirely relieved of his former troubles.

Remarks.—Although the cure was not completed in the first two cases of varix, still the result of our operation proved itself, I think, sufficiently successful to establish the superior advantages of silver ligatures over the ordinary methods recommended.

The result of our third case could not have been more satisfactory. It is needless to comment on the result of the operation in the case of varicocele. Suffice it to say, it could not have been more satisfactory. The advantages of the button suture principle, in the treatment of the diseases of which we are speaking, may be thus briefly stated :

1st. The inocuousness of the silver wire.

2d. The protection afforded by the button against undue pressure upon the skin in front of the vein.

3d. The facility of adjusting the apparatus, and the great power given the surgeon over the vein, without risk of the wire breaking, as by tying.

4th. The certainty with which the vein or veins can be cut in two, and their occlusion effected, with evidently less risk of the dangers in the usual modes of operation.

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TRICHINA AND TRICHINOSIS.

[We take from Appleton and Co.'s New Cyclopædia for 1865, the following history of the trichina spiralis and the disease it produces in men (Trichinosis.) It is of peculiar interest at present, as it is a disease resembling cholera in many of its symptoms, and throws light on the specific cause of cholera. It will be seen that these trichina are to be found in our hogs as well as in those of Europe, and the only preventive is to boil well all the pork one eats—not to eat uncooked sausages or shipped ham. Very little can be done in the way of treatment only at the first instant of the attack, then chloroform in drink doses would be the most efficient.]

SWINE, DISEASE OF (TRICHINOSIS AND TRICHINIASIS), a disease produced in swine by a parasite which infests their muscular tissues, and which may produce in the human subject who has partaken of the diseased flesh serious disease, and in some cases death. This parasite, Trichina spiralis, is not the only one which infests the intestines or flesh of the swine. The measles in pork are produced by the presence of the Tœnia solium or tape worm in its encysted stage. This measly pork being eaten by man, the encysted scolex or head set free attaches itself to the human intestines, and develops into that terrible pest, the tape worm. Joints or sections of this passing from the bowels are eaten by swine, and thus reproduce the parasite.

The Trichina spiralis does not belong to this highly organized and complex order of cestoidea or encysted worms, but to the lower and simpler order nematoidea or round worms, of which the ascarides or pin worms, and the oxyurides, are familiar examples. Trichinous pork contains the young worms either free or coiled up and enclosed in capsules within the muscular tissue, according to the length of time they have remained there. In shape they resemble the adult, but are smaller and sexually immature. Unless previously destroyed by cooking or other process, when the muscle containing the encysted worms is eaten, they pass the stomach uninjured and escape from their capsules if encysted by the digestion of the cyst. In the intestinal canal they grow rapidly, and become mature in a few days. Impregnation immediately follows, and the young begin to leave the female within a week, in the form of minute transparent worms. They may continue to escape for weeks, and in immense numbers. They bore at once into the intestinal cells, and penetrate to nearly all parts of the muscular system. They feed upon the muscular tissue, and after an indefinite period coil themselves up and are enclosed in a sac, which in time becomes cretaceous. In this quiescent stage they may remain alive for years, and after the death of their host may become mature in turn by entering the intestinal canal of some other animal.

The symptoms caused by their presence vary according to the number eaten and the stage of development. At first nausea, loss of apetite, and intestinal irritation. Afterwards debility, fever, œdema of the face, movements of limbs, pain, and sensitiveness of muscles on pressure. Lastly, great inflammation of intestines, with bloody stools, increased muscular pains, partial paralysis of muscles of deglutition, speech and respiration; and finally death from exhaustion. If only a small quantity of the trichinous pork be eaten, the symptoms will be mild, and in all cases they will disapper when the worms have become quiescent or encysted in the muscular tissue.

The capsule, sac, or cyst, which encloses the trichina in the muscle varies in size. The largest are about one-thirtieth of an inch long and one-hurdredth of an inch broad; it tapers at each end, and is usually, though not always, prolonged at each extremity into a very fine thread-like appendage. The fully developed trichina is a round worm one twenty-eighth of an inch in length, and the one six hundred and twentieth of an inch in thickness, and is usually found coiled upon itself. The young, which penetrate the intestines and seek their feeding ground in the muscles, are much smaller, but very active. The number of these animals is sometimes astonishing. In a cubic inch of ham the number has been estimated at 85,000.

The female brings forth from sixty to one hundred live trichinæ, and the process is repeated twice or three times during the lifetime of these trichinæ, a period probably of from one to three weeks. It is said by careful observers that the female worm gives birth to from two to three hundred young. The parent parasites never leave the stomach and alimentary canal.

They avoid the brain, lungs and liver, and in only a single instance has one been found in the substance of the heart. Their perforation of the stomach and bowels often gives rise to acute diarrhœa and dysentric symptoms, and where they attack the serous membranes lining the abdominal walls, symptoms of peritonitis are added. This inflammation of the serous membrane, if it does not prove fatal, leaves the intestines firmly glued together. The muscles of the chest and anterior portion of the neck, and those of the back and extremities, are those in which they seem to find their most congenial resting place. It is somewhat remarkable that children suffer much less than adults from the incursions of these parasites, and in their case they seldom prove fatal, while among adults from twenty-five to seventy-five per cent. of those attacked die. The muscles upon which this animal has fed become useless in proportion to the number of ultimate fibres which are destroyed. When it is remembered that a single ounce of flesh may contain trichinæ enough to produce in eight days 3,000,000 young, it is not surprising that the entire substance of the abdominal muscles should be sometimes found consumed.

The history of the discovery of this parasite is interesting as exhibiting the carefulness and thoroughness of scientific research. About the year 1832 several English physicians noticed in the lean flesh a minute yellowish white granule, which is the adventitious shell enclosing the worm. These Hilton, an English anatomist, supposed to be animals ; but the zoologist Owen was the first who described and named the worm itself—Trichina spiralis. This was in 1835. Precisely as the white and yolk of a hen's egg are not visible through the shell which contains them, so with the trichinæ. It is frequently from one-third to one-half a line long, measured when its body is uncoiled ; but from its transparency, it cannot with the naked eye be recognized as having the structure of an animal. This, however, can readily be seen under a lens of fifty or sixty diameters. A number of observers have found this animal in the persons of natives of England, France, Germany, Denmark, and North America. The diseases it occasions, and the deaths owing to its presence in the flesh of human beings, have for years engaged the attention of the medical men of Germany, and have at several periods alarmed the people of that country. The epidemic of this disease which recently occurred in Hedersleben is similar to several epidemics, or groups of cases of the disease, which have occurred since the year 1859. They arise from the penetration into and lodgment in various parts of the living human body, particularly the muscles, of the young trichinæ.

The history of the investigations of the last ten years, of the life of the animal, and the characteristics of its career, comprises the accounts of a number of observers who undertook to ascertain both its natural history and the consequences of its becoming an inmate of the human body. In 1860, Prof. Virchow, of Berlin, conducted a series of experiments with the trichinæ, (consisting of feeding the meat which contained them to certain animals, under careful observation), by which he acquired all that we know of the mode and consequences of their introduction into the living body. The infestation of the human body has as yet only been found to occur from eating the flesh of the pig. But the trichinæ have been found in other animals usually regarded as strictly herbivorous, as moles, etc. Special investigations have, however proved that these animals consume smaller animals, as field-mice, ground worms, etc., and hence are flesh eaters—being in this respect like rats, mice, etc. Other animals, such as rabbits, may be infested by feeding them the flesh containing trichinæ, but nevertheless the only flesh man consumes which contains the trichina, in the order of nature, is that of the pig.

In the year 1863 there was a wide-spread fear, derived from the opinion of various writers, that the meat of plant feeding animals may contain the trichinæ, and the authorities of Merse announced that beef was not exempt from trichinæ, but as yet it is doubtful if trichinæ have ever been observed in beef; and even if, as supposed, the trichinæ disease was contracted from eating it, if it was obtained from the same butcher who sold pork containing trichinæ, it must be ascertained whether the beef had not become infested by lying in contact with the pork. So far as scientific investigation teaches us, neither in beef nor mutton have trichinæ been found.

From the fact that small, round worms, similar to trichinæ, exist in the muscles of the eel and frog, various authors have supposed them to be far more general in their distribution than Virchow and Leuckhardt assert. The rain worm was asserted by Laugenbach to contain trichinæ, and the pig was supposed to become infested from devouring these; but careful investigation showed that the microscopic worm which infested the ground worm was that long known as Acaris minutissima. Again, Schachte has stated that some vegetables, and especially the root of the sugar-beet, contained trichinæ, but although oxen fed upon bad beets have sickened and died in numbers, the trichinæ have never been found in their flesh, as before stated. We repeat that, so far as ascertained, the pig's flesh is the only flesh man consumes which contains trichinæ. How, then, does the pig become infested? The supposition that they have their genesis in his body, and are not taken in his food, is totally inadmissible. Researches show that there is every probability that the pig neither derives the trichinæ from the animals nor vegetables he devours, but from the fæcal matters he consumes. Hence, it is probable that at all times particular, individual pigs have been affected, and that refuse matter from the bowels of whoever may have consumed his flesh may have been consumed by other pigs, and the disease thus spread and involved a large number of people. Most of the epidemics of trichinæ disease have occurred in Saxony, where the pigs are fed in styes. It is very probable that pigs may infect pigs, for the contents of the intestines of one which contains pregnant trichinæ may be eaten when expelled by another pig. We may consider it established, therefore, that, in the common course of affairs, trichinæ can only be found in the carnivora. For we have seen that the intestinal trichinæ produce living young which migrate into the flesh and then attain their further development. They cannot leave the meat in any other way than after it has been eaten, and this regular progression from the intestine into the muscles, and from the muscles into the intestine, is only possible in meat eaten. This order of the infestation may be here stated under three cardinal points :

1. The eaten trichinæ remain in the intestines unless expelled by purgation, and never enter the muscles.
2. They produce living young, which enter the muscles.
3. The young which have entered the muscles grow there, but do not multiply.

The chances of injury to the meat-eater are in proportion to the number which enter the intestines, and the danger is in the production of young by the intestinal trichinæ.

Recently, Dr. Ferry, a physician of Brooklyn, L. I., who has been engaged for some years in sanitary investigations, stated to the Metropolitan Board of Health of New York that trichinæ have been found in the beef of the cows fed on swill at the distillery stables on Long Island. He states that the pigs fed on the swill and kept in filthy styes are largely trichinous, and that the rats which are very numerous in these stables and styes become filled with trichinæ ; the cows devour the excretions of the rats with the swill, and thus take the disease. This seems reasonable, and it is not impossible that, though ordinarily graminivorous animals are not subject to the disease, these swill-fed cows may be exceptions,

The first cases of death from trichiniasis, of which we have positive proof, though doubtless thousands may have occurred before attention was called to it, took place in 1815. The history of these cases is curious and interesting. In the summer of 1863 an elderly person was being operated on for a tumor of the neck by a German surgeon. During the operation the bared muscles were observed to be abundantly supplied with the characteristic shells or cysts of trichina. The patient related, in reply to a question whether he had ever been very sick, that in the year of 1815, with the other six members of a commission for the inspection of schools, he ate a meal of ham, sausage, cheese, &c., at an inn. All who ate of these provisions soon after fell sick and died, except the relator himself. Suspicion fell upon the innkeeper. A judicial investigation was held, but without result—precisely as it would be now if we had not that knowledge of the trichinæ we possess. And in this case the survivor might have gone to his death and yet nothing have ever been known, in his particular case, of the infestation by trichinæ, which had proved fatal to his six associates, had it not been for the knowledge science had furnished many years after that fatal meal was eaten.

In June, 1851, in the neighborhood of Hamburg, several well persons having eaten ham, fell sick. Three of them died, and others were long in a critical state. A judicial investigation was held without satisfaction. Ham poisoning was supposed, but long afterwards it was shown that the symptoms and other circumstances pertaining to the sicknoss and death of these people, were precisely similar with those subsequently ascertained to be trichinæ infestation.

We come now to the occurrence of epidemics of this disease. Zenker first observed such an epidemic in and near Dresden, and showed the trichinæ found in the ham and sausage, made from one particular pig. This pig had been butchered on a farm near Dresden. The butcher and owner of the farm, and other people, had fallen sick, and a previously perfectly healthy servant-girl had died. In her body an abundance of trichina were found. With the finding of the trichina in the muscles of her body, Virchow commenced a series of experimental observations. These may be briefly stated. A rabbit fed with trichina-flesh from this girl died in a month, and its flesh was found full of them. Some of this flesh was given to a second rabbit, which also died in a month. With this meat three other rabbits were fed. Two of these died at the end of three weeks, and the third in the fourth week. Lastly, the flesh of these animals dead of trichinæ was fed to another rabbit. It ate but very little, yet died at the end of six weeks. In all of these the muscles, after death, were found filled with trichinæ, and even in the smallest particle of the meat several were found. It is to be observed that trichinæ had never been found in these animals unless they had been previously fed with the trichina-containing meat. Their living flesh was examined before they were fed, and no trichina were found in them ; yet a few weeks after they were fed with the meat, the muscles of the same animals were found filled with trichina.

In the district of Magdeburg the cases of this disease spread over a period of four years. Since the year 1859, a whole series of epidemics of this disease have been observed. They occurred at Plauen, Calbe-on-Saale, Quedlinburg, Burg near Magdeburg, Weimar, and Hettstadt near Eisleben, and other places.

In 1861 a woman was admitted to the Altona hospital with a cancer of the breast of twelve years' standing, which was removed, and, strange to say, on microscopic inspection, found to contain a considerable number of trichinæ. This led to an inquiry which gave the following information :

In 1856 she was residing in the city of Davenport, Iowa, with her brother, and taken suddenly ill with gastric and rheumatic symptoms, together with œdema and partial paralysis. Convalesence was very protracted, and she never recovered the free use of her fingers at the piano. Her brother was attacked with similar symptoms at the same time, but they were much less severe. After her death at the hospital in 1864, many of the muscles were found to contain encysted trichinæ, the capsules being very cretaceous. Portions of this tissue were given to a cat which was kept in confinement, and after its death, on the sixteenth day, its muscular system was found crowded with free trichinæ of various sizes, all within the enlarged tubes of the sarcolemma. There seems to be no doubt that this was a case in which the trichinæ remained alive seven or eight years, and were capable of reproducing the disease after this long hybernation. Virchow relates another case still more remarkable, where the worms were living after thirteen and a half years, and on being removed from their cretaceous prisons, moved actively when placed in the sun, and were found capable of reproduction within the intestinal canal of a rabbit. As to the period at which the capsules are formed within the sarcolemma, or when the cretaceous formation begins, nothing definite is known.

The symptoms, progress, and the terrible fatility of the disease, are well exemplified in the history of the Hettstadt tragedy, which is taken from a British medical journal :

> This village is situated near the Hartz Mountains, in Germany. An annual festival was celebrated there some two years since, and one hundred and three persons sat down to a dinner, the third course consisting of rostewurste and gemuse (sausage and vegetables.) The sausage had been prepared before hand for this special occasion. The steward who had been commissioned to furnish the pig for this purpose, gave the butcher a lean, ill-conditioned one, instead of a thrifty one which had been bargained for. The day after the festival, several persons who had participated in the dinner were attacked with pain and irritation of the intestines, with loss of appetite, fever, and great prostration. The number increased from day to day, and an epidemic of typus or septic fever was apprehended, as the symptoms began to assume that character. However, as the disease progressed, the symptoms assumed a different type, and to diarrhœa, dysentery, and fever, were added peritonitis, circumscribed pneumonia, and paralysis of the abdominal and intercostal muscles with those of the neck. Then the typhus theory was abandoned, and some unknown poison was assumed to be at the bottom of it. Under this conviction, every article of food and material used in connection with the dinner was rigidly examined. By this time the trichinæ had reached the muscles of the calf of the leg in some of the victims, and Zenker's description of the disease was called to mind. The remnants of the sausage were examined, and found to be literally "swarming" with trichinæ. Portions of muscle from the calf of the leg of the affected ones were examined under the microscope, and were found literally full of free trichinæ, these were the progeny of the encapsuled ones which had escaped the smoking and frying process to which the sausage had been subjected.
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> No less than eighty-three of the above mentioned number died within a few weeks, and the surviving twenty, at last accounts, were still lingering in agony, and apprehensive of a similar fate.
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> This awful catastrophe at Hettstadt awakened sympathy and fear throughout Germany, and many eminent medical men were consulted in the interest of the sufferers, but none

could bring relief or cure. With an obstinacy unsurpassed by any other disease, trichiniasis surely carried its victims to the grave.

Many vermifuges were employed, with the hope of removing the parasites still in the alimentary canal. Picric acid was employed, until its effects seemed as dangerous as the disease itself. An examination of the bodies after death showed the trichinæ to have been unaffected by any of the remedies employed. The terrible conviction now fastened itself upon the minds of all who witnessed these scenes, that a person afflicted with this parasite was doomed to die the slow death of exhaustion from nervous irritation, fever, and paralysis of all the voluntary muscles.

Since the Hettsadt tradegy the public mind in Germany has had little rest from apprehension of this terrible scourge. A wholesale poisoning soon after occurred in Offenbach, a manufacturing town in Hesse-Darmstadt. Upwards of twenty persons were poisoned by eating trichinous pork, several of whom have died. But Hettstadt, with its tragedy and appalling concomitants, is eclipsed by the late visitation at Hedersleben, another German village, where three hundred inhabitants partook of trichinous pork, and at this writing full one hundred are in their graves. The butcher slaughtered four pigs, which were sold to the villagers. The butcher and his wife, partaking of the same meat, became themselves the earliest victims. A very injudicious custom seems to have obtained in this village, as well as in many other parts of Germany, namely ; that of eating pork in a raw state, cut fine and spread upon bread. Although the scenes at Hettstadt were still fresh in the public mind, and the very uniform character which the symptoms always present was well understood by the medical profession generally, yet the people, through fear and ignorance, fled from what they believed to be a visitation of cholera. The consequences can easily be imagined. Many were seized with the disease, and died on the highways. The irritation of the stomach vomiting, and diarrhœa, might well be taken for the premonitory symptoms of the above disease by the mass of the people. Indeed, the village doctor was himself misled, as he treated the sufferers with opium and astringents. This treatment was evidently intended to control the diarrhœa ; but it proved fatal to the patients, by confining the parasites in the stomach and alimentary canal until they had opportunity to pierce through the walls. Out of twenty-eight persons treated in this manner, twenty-seven died. One very remarkable fact has been noted in connection with the epidemic at Hedersleben, namely : that as yet no children have died of the disease, all having made a good recovery.

We have already seen that one of the German cases originated in this country, but it is not till recently that we have had any well-authenticated cases of death occurring from the disease in this country, though the encapsuled trichinæ have often been found in the muscles after death, by physicians who were conducting autopsies.

In the "American Medical Times" of February 20, 1864, a case is reported by Dr. Schnetter, in which a whole family was poisoned by eating trichinous pork. The father was the only one in whom the poison proved fatal. This case occurred in New York city. The Buffalo "Medical Journal" contains the account of two fatal cases occurring in the western part of that State. A man and his wife, residing in the village of Checktowaga, Chautauqua County, N. Y., were found to be affected by an "apparently acute rheumatism, of a peculiar character." Dr. Krombein, the attending physician, suspected trichinæ, and the patients having shortly after died, a microscopic examination was instituted by Drs. Krombein and Homberger, which demonstrated the existence of the parasite in great numbers.. The specimens of muscle taken from the bodies of the dead, together with a remnant of the sausages of which they had partaken, were subsequently examined by Dr. J. Lathrop and Professor George Hadley, under the microscope, and trichinæ found in both. In the human muscle they were free ; in the sausage, they were encysted. Other members of the family were affected, but probably did not eat enough to prove fatal.

Dr. Dingler, reports two cases in Marietta, Ohio, and Dr. Herman Keifer, of Detroit, Michigan, gives in the "Detroit Medical Review" a marked case in a young German woman, twenty-one years of age, which proved fatal about four weeks from the first attack. It is by no means impossible that the mysterious disease at Willard's Hotel, Washington, may have arisen from this cause.

The number of swine affected by this disease is probably very small. In Brunswick, Germany, out of twenty thousand swine examined, but two were found to be trichinous ; but as we have seen, the flesh of a single hog affected by this disease has caused the death of one hundred persons. A recent examination made by a committee of the Scientific Academy of Chicago of swine slaughtered in that city, developed the fact that out of 1,394 animals examined, encysted trichinæ were found in twenty-eight, or nearly two per cent. of the whole number. As the swine slaughtered at Chicago, are for the most part, brought from the country, where they have been fed on corn, mast, or other wholesome food, it is hardly probable that those slaughtered in other cities would show a smaller proportion. There exists in Germany a habit, occasionally practised here, of eating portions of lean pig's flesh, (ham, or sausages) uncooked, with bread. There is great danger in this, for the only preventive of infestation by those who will eat swine's flesh, consists in having it well and thoroughly cooked. Ham is more generally affected than any other portion of the carcass of the swine, and it is only by raising the temperature of the whole of the meat in cooking at least to 156° F., that the encysted parasite can be destroyed. Kuchenmeister, Hubner, and Liserig, German chemists and physiologists, have made extensive series of experiments on this subject, and have ascertained that in most instances of cooking, especially of boiling entire hams, the whole of the meat is not raised to this temperature, and that the trichina protected by its cyst retains its vitality after cooking. They lay down the following positions as ascertained by these experiments :

1. That trichinæ are killed by long immersion in the brine of the meat, and by twenty-four hours hot smoking of sausages,

2. That they are not killed by three days' cold smoking, and the boiling of meat for making sausages does not certainly kill them.

3. A long keeping of cold smoked sausages will destroy the life of the trichinæ.

It might be well if here, as in some portions of Germany, the pork were inspected by a competent inspector, with a microscope, before packing. The hams and bacon, or middlings, are the only portions which need to be examined, for if there are no trichinæ there, there will not be any in the carcass.

CONSTITUTION AND BY-LAWS

OF THE

MEDICAL ASSOCIATION OF TEXAS.

ARTICLE I—TITLE OF THE ASSOCIATION.

Section 1. This Institution shall be known and distinguished by the name and title of the *Medical Association of Texas*.

ARTICLE II—MEMBERS.

Sec. 1. This Association shall not be limited as to numbers, but be open to every gentleman of the Medical Profession residing within the limits of the State, under the terms and conditions hereinafter to be expressed.

ARTICLE III—OFFICERS.

Sec. 1. Besides fellows or members, the Association shall also consist of the following officers, viz: A President, two Vice-Presidents, Corresponding Secretary, Recording Secretary and Assistant Recording Secretary, and Treasurer.

Sec. 2. There shall also be an Executive Committee, which shall be composed of the officers of the Association; three of whom shall constitute a quorum.

ARTICLE IV—MEETINGS.

Sec. 1. A meeting of the Fellows of this Association shall be held annually on the second Monday of November, at two o'clock P. M., in the city of Austin.

Sec. 2. At such meeting, seven Fellows shall constitute a quorum for the transaction of business.

Sec. 3. Notice of annual meeting shall be given in two of the public papers, by the Recording Secretary, at least two months previously

ARTICLE V—ORDER OF BUSINESS.

Sec. 1. Election of officers for the ensuing year; Reading of the minutes of the last annual meeting; also, The transactions of the Executive Committee for the preceding year.

2. Report of Committees shall then be called for by the President.

3. Alterations or amendments to the By-Laws, proposed by any Fellow, shall next receive the attention of the Association; which shall be submitted in writing; two-thirds of the members present consenting to such alteration or amendment, it shall be adopted.

4. Such scientific communications as the Executive Committee may have ordered, shall be laid before the Association.

5. Any proposition or suggestion which may be thought to be conducive to the general interest of medical science, or the welfare of the Association, may be offered by any member; the Association deciding by vote, whether to engage in the consideration of the same.

Sec. 2. At eleven o'clock, A. M., on the Tuesday after the second Monday, the President shall call upon the Anniversay Orator to deliver the annual discourse; and all unfinished business shall be suspended until after its delivery.

ARTICLE VI—ELECTIONS.

Sec. 1. At the annual meeting of the Association, there shall be elected a President, two Vice-Presidents, Recording Secretary, Assistant Recording Secretary, Corresponding Secratary and Treasurer, who shall forthwith enter upon the discharge of their respective duties.

ARTICLE VII—MEMBERSHIP.

Sec. 1. Nominations of candidates for fellowship shall be according to the following form: "The subscriber nominates for admission as Fellow to the Medical Association of Texas, A. B. He was educated by C. D., and has a respectable standing in the profession.

Sec. 2. Elections for membership shall be by ballot: a majority of the members present voting in the affirmative, the candidate shall be declared elected.

Sec. 3. The District Societies shall have power to examine the credentials and qualification of applicants for admission; and on presentation of a certificate of competence and eligibility from a District Society, the applicant shall be admitted by the President and Executive Committee, a member of the Association.

Sec. 4. Any member of this Association residing where there is no organized District Society within fifty miles, shall be authorized to examine the Diplomas of applicants for membership in this Association; and shall transmit, to the Executive Committee, a certificate of the identity of the applicant, and the source of the Diploma; whereupon, a certificate of admission to fellowship shall issue to the applicant, as hereafter provided.

Sec. 5. No person shall be admitted a member of this Association, who has not a diploma from some respectable medical school.

ARTICLE VIII—DIPLOMA.

The following shall be the form of Diploma, issued to each member on application :

SOCIETAS MEDICA REIPUBLICÆ TEXANÆ,
ANNO DOMINI MDCCCLIII.
INSTITUTA, ET EODEM ANNO AUCTORITATE REIPUBLICÆ CONFIRMATA.

OMNIBUS ad quos pervenerint salutem.
VIRO ornato ....
qui in numerum nostrum hoc anno fuit admissus,..
....
hoc munus liberis sociorum suffragiis, lubentissime conceditur. DIU VIVAT, et floreat patriæ, scientiarumque decus; utque SOCIETAS hæc semper illius, sic ejusdem memor, prestet.
IN QUORUM FIDEM has literas, sigillo SOCIETATIS munitas, subscripsimus Austiniæ ;
....Anno Domini, 185 .
....Præses.
....Secretarius.

ARTICLE IX—PROXIES.

Fellows absent from any meeting shall, in all cases, be entitled to vote by proxy in writing : provided, that no fellow shall represent more than five others.

ARTICLE X—DISTRICT SOCIETIES.

There shall be also established District Societies, to be organized according to the mode and plan hereinafter set forth.

ARTICLE XI.

Sec. 1. The Corresponding Secretary shall have power to convene the Executive Committee.

Sec. 2. At the annual meeting of the Association, two standing committees shall be appointed, viz: a committee on Publication and a committee on Medical Topography and diseases of the State.

Sec. 3. The committee on Publications shall have direction of a publication which shall be issued annually, by the Association, as early after the annual meeting as practicable, to be distributed by the Secretary to each fellow or retired member ; and that publication shall contain the annual discourse, unless otherwise ordered by the Association ; such other medical communications as the Executive Committee may authorise to be published ; an abstract of the proceedings of the Association, together with a list of the officers of the State and District Societies, of those who have become fellow or honorary members during the preceding year, or who have resigned or been expelled.

SEC. 4. One week preceding the annual meeting of the Association, the Executive Committee shall examine the Treasurers account, and report to the Association.

SEC. 5. Appointment of committees shall be made by the President.

SEC. 6. The Association at its annual meeting, shall appoint a suitable person to deliver before the felllows, at their annual meeting, a discourse on some medical subject of his own choice ; and in case of his declining the service, the President, with the Executive Committee, may appoint another in his stead. And every discourse so read shall be considered the property of the Association, and a copy be required to be deposited with the Corresponding Secretary, within one month after its delivery.

SEC. 7. It shall elect annually, delegates to represent the Association in the American Medical Association.

ARTICLE XII.—PRESIDENT.

SECTION 1. The President shall call all meetings of the Association and Executive Committee ; preside at the same ; preserve order ; regulate the debates ; state and put questions ; call for reports of committees ; enforce the By-Laws, Rules and Orders ; have the casting vote ; and perform such other duties as may be assigned him.

VICE-PRESIDENT.

SEC. 2. In case of the absence, (from any cause whatever, either from the meetings of the Association or Executive Committee,) of the President, one of the Vice-Presidents shall perform all the duties incidental to the Presidency ; and in case of the abscence of all these officers, the duties shall devolve upon the senior fellow present.

RECORDING SECRETARY.

SEC. 3. The Recording Secretary shall keep the seal of the Association together with its records, and all papers required to be filed ; supply elected members with their diplomas, signed by the President, with his own signature and with the seal of the Association duly affixed, and to the other officers of the Association, such other blank certificates as the by-laws may render necessary or proper ; keep a fair record of its proceedings ; read its minutes, and all such communications as the Executive Committee may require to be made ; receive and record nominations for election into the Association, and cause them to be laid before the Executiue Committee ; notify chairmen of committees appointed by the President or Association—specifying in each case, the commission and names of the committee ; keep a copy of the by-laws ready for subscription ; and perform all such other duties as may be assigned him.

CORESPONDING SECRETARY.

SEC. 4. The Corresponding Secretary shall receive and have the custody of all communications to the Association and prepare and transmit answers to the same in such form or language as the Executive Committee may direct ; he may cause letters or communications in a foreign language to be translated into English, or vice versa ; transmit to the Treasurer of the Association, a fortnight before its annual meeting, the names of the new fellows for the preceding year ; and perform all such other duties as may be assigned him. Letters and communications should be andressed to him.

Either of the Secretaries being absent from the meetings of the Association, his duties shall be performed by the other, if present ; and a transfer, as soon as possible, be made to the absent Secretary, of the papers, orders, or records, belonging to his department. The records of the Association, and of the Executive Committee shall be produced at every annual meeting of the former ; and be otherwise, at all times conveniently accessible to every fellow.

TREASURER.

SEC. 5. The Treasurer shall have the care and management of the fiscal concerns of the Association ; keep an accurate account of receipts and expenditures ; furnish an annual statement of the same and the funds in his hands, or other property, at the annual assembly of the Association ; subject his accounts to such examination as the Executive Committee may order ; receive donations or bequests, as well as money due the Association, and under the direction of the Executive Committee, sue for all fines and assessments ; sell or lease any estate, and execute the necessary papers. He shall also, examine all charges and accounts against the Association, and present them for payment, if correct, to the President ; but shall not pay any money out of the treasury, without an order from that officer ; and when the Association shall deem it requisite, and the funds admit of his being compensated, due security shall be required for the trust reposed in him, and a suitable per centage or salary be given for his services.

RESIGNATION AND REMOVAL.

SEC. 6. Officers may resign for sufficient reasons, or be removed by the Association for inattention, neglect, or misconduct. In either instance, or a vacancy occasioned by death, the Executive Committee shall fill the vacancy, as soon as convenient, or the importance of the office demands.

ARTICLE XIII.—ASSESSMENTS.

Every fellow shall contribute ten dollars annually to the funds of the Association, and pay the same to the Treasurer ; and if not paid at the annual meeting, the Treasurer shall collect it as soon thereafter as possible, and always, if practicable, within the year ; legal measures to enforce it may also be taken by him, under the direction of the Executive Committee.

ARTICLE XIV.—RESIGNATION.

Any member may resign from the Association, provided his arrears be paid.

ARTICLE XV.—RETIRED MEMBERS.

Members of 60 years resigning from the Association, shall be designated as Retired Members, and free from assessments and liabilities of office, at the same time that they are suffered to retain all the other priviliges of membership ; but they shall conform to all the requirements of the Association, and be subject to its penalties.

ARTICLE XVI.—EXPULSION.

Any member may be expelled from the Association, or having resigned, be deprived of his priviliges, by a majority of two-thirds of the members present, for notorious and gross immorality; infamous crime under the laws of the land; attempt to destroy this Association; Violation of any of its by-laws, for which expulsion is the penalty; and false certificates of studies or character of Students of Medicine; the expulsion may be made at any annual meeting; and ample opportunity shall be afforded for refutation or defence before the Association.

ARTICLE XVII.—FORM OF SUBSCRIPTION.

"We, the undersigned, severally agree to comply with the By-Laws of the Medical Association of Texas. We, further, declare that we regard the entering into contracts with individuals or families, for medical services, a violation of the spirit and letter of this obligation, and not only disreputable, but detrimental to the interest of the profession."

ARTICLE XVIII.

SECTION 1. The Executive Committee shall examine all scientific communications made to the association, and dispose of them as it may judge most expedient; and such of these as it may select, or which the association may judge proper, or conducive to the welfare of medical science, may be published at the expense of the Association, within the limits of its funds.

ARTICLE XIX.—CODE OF ETHICS.

The Association adopts, as its Code of Ethics, the one which has been commended and adopted by the American Medical Association.

ARTICLE XX.—FEE BILL

It shall be the duty of each District Society to establish a *Fee Bill*, to govern its own members.

ARTICLE XXI.—DISTRICT SOCIETIES.

SECTION 1. It being important that there should be but one medical organization throughout the State; that District Societies should be collateral branches of one parent society; and that distinct associations, with equal powers, opposing each other, defeating the objects of a medical organization and bringing contempt upon the whole body of the profession should be avoided. The following are the restrictions under which the Association shall proceed, whenever called upon to institute them.

SEC. 2. Whenever any district is desirous of organizing a District Medical Society, it shall apply (in writing) to the Executive Committee; stating the extent of the territory, and the number of practitioners intended to be comprehended by it; and village, town, or place where it is proposed to hold its meetings. The committee shall, if such application be granted, forthwith cause a charter to issue, to the following effect:

STATE OF TEXAS, 185 .

To

Fellows of said Society, GREETING:

Your application, made in due form, requesting the institution of a subordinate District Medical Society, to consist of Fellows of the Medical Association of Texas, residing in the District of , was duly considered at a meeting of the Executive Committee, on the day of A. D., 185 ; and it was thereupon voted that your request should be granted.

Be it, therefore, known, that pursuant to an act of the Legislature, authorizing the Medical Association of Texas, a District Subordinate Society by the name of , is hereby established, to consist of those Fellows of the Association, now resident within the limits aforesaid, for the purpose of electing officers and transacting such other business as they shall deem expedient.

{L. S.} In testimony whereof, the President, pursuant to the aforesaid vote of the Executive Committee, has hereunto subscribed his name, and caused the seal of the Association to be affixed, this day of , A. D., 185 .

C. D., Recording Secretary. A. B., President.

ELECTION OF OFFICERS.

Sec. 3 Every District Medical Society shall elect, annually, a President, Secretary, Treasurer, Librarian, and such other officers as it may see fit; who shall examine all communications made to that Society, and direct the Secretary thereof to transmit to the Corresponding Secretary of the Association, such communications, copy thereof, or extracts from, as they may judge deserving the inspection of the Executive Committee.

SECRETARY.

Sec. 4. Each District Secretary, immediately after the election of officers, shall annually transmit to the Recording Secretary, a list of the officers chosen; have custody of all communications made to that Society; keep a fair record of their proceedings, and transmit an account of the same to the Corresponding Secretary, and, from time to time, transmit also to the same Secretary, whatever communications the district officers may think worthy of being brought to the notice of the Executive Committee, and any change that may occur in his district by death or removal of a fellow of the Society, and any omission of duty, he may be requested by the Corresponding Secretary to fulfil on the authority of this by-law.

Sec. 5. Any village, town, &c., adjoining a medical district, but not included within its limits, in which there are fellows wishing to connect themselves with the District Society, they may receive authority to do so, upon application; provided they have the concurrence of that Society, expressed by a majority of votes taken at one of their regular meetings.

ARTICLE XXII—DECISIONS.

All questions requiring to be settled in the Association, or District Societies, not otherwise specially provided for, shall be decided by a majority of the fellows present.

ARTICLE XXIII—PENALTIES.

SEC. 1. All improprieties on the part of officers or fellows, for which no special penalty has been provided, shall be punishable in such manner as the Association, after deliberation, may think proper to inflict, in the way of suspension or expulsion, after due admonition and opportunity of exculpation.

SEC. 2. Any fellow not conforming to the Code of Ethics shall be expelled.

SEC. 3. The same penalty of expulsion shall be inflicted upon any fellow violating the fee bill.

ORDERS.

1. The President, at the meetings of the Association, or Executive Committee, shall not vacate the chair, unless permitted to do so, or required by some urgent occasion; nor speak on any question without first obtaining permission.

2. Members speaking, must rise and address the chair, and sit down when they have done.

3. Members who have spoken shall always give place to those who have not.

4. No member speaking shall be interrupted, unless to correct a mistake, or call him to order.

5. All speaking shall cease, after any question has been put.

6. No motion shall be considered unless seconded.

7. No vote shall be reconsidered at the same meeting, by a less number than were present at its passing.

8. Literary gentlemen interested in medical science, and medical students shall be publicly invited to hear the annual discourse.

ON POLYPOID GROWTHS IN THE RECTUM, AND THEIR OCCASIONAL ASSOCIATION WITH ANAL FISSURES.

By JAMES R. LANE, Esq., Surgeon to St. Mary's and the Lock Hospitals, and to St. Mark's Hospital for Diseases of the Rectum.

[The object of the present paper is to call attention to the association of the rarer diseases of polypus of the rectum with anal fissure; the two affections apparently holding the relation to each other of cause and effect.]

In the cases before considered—namely, of hemorrhoids combined with fissure—the outward evidence of the former diseaee is so much more prominent and striking, that the latter is in danger of being overlooked, and of being disregarded in the treatment. The reverse, however, is more likely to happen in the cases now under consideration; for in them the fissure will, in all probability, be readily discovered,—while its cause—the polypoid growth within the rectum—is very likely to escape notice. The following is a good example of this class of cases. I could adduce many more, but one will be sufficient for the purpose.

Isabella B., aged 40, needlewoman, unmarried, was admitted into St. Mark's Hospital, December 17th. She had had some uneasiness and sense of irritation about the rectum for eighteen months, with occasional loss of a small quantity of blood with her motions. For the last six months something about the size of the tip of her finger had been occasionally protruded at stool, and had caused severe pain till it had been drawn back again, which was only affected by degrees and with great difficulty. For eight weeks, however, she had suffered pain of the most acute character during and after every action of the bowels, and independent of the protrusion alluded to, which was not constant. The pain lasted nearly the whole of the day; it compelled her to keep in bed during its continuance, and almost entirely prevented her following her occupation. The dread of it caused her to avoid passing a motion as long as she could, and the accumulation of hardened fæces thus occasioned of course greatly increased her distress. She had the anxious and haggard expression so often seen in persons suffering from fissure of the rectum—like that of a person laboring under severe organic disease; and she stated that she was "falling away" rapidly.

On examination, I found a well-marked fissure, with indurated edges upon the sphincter muscle in the usual situation at the posterior part of the anus. With the finger in the rectum, a polypus, the size of a nut, was readily discovered. It was attached by an elongated narrow pedicle to the posterior part of the bowel; but it had no direct connexion with the fissure, for its pedicle was inserted nearly an inch and a half higher up. The examination was attended with severe pain from the spasmodic contraction of the sphincter muscle.

Dec. 19th.—A free incision was made through the fissure. The polypus was then drawn down by a vulsellum, and a ligature was applied at its point of attachment. It was then cut off just beyond the ligature.

The result was complete relief from all the painful symptoms. The ligature came off on the fifth day, and the wound was soundly healed at the end of three weeks, when she was discharged from the hospital cured. A very marked improvement had taken place in her general health and appearance; the anxious expression of the face had disappeared, and she had gained flesh considerably. She had had no pain since the operation, except the slight smarting occasioned by the fæcal matters passing over the cut surface.

Since my connexion with St. Mark's Hospital, I have met with as many as nineteen cases similar to the above, illustrating the combination of rectal polypus with anal fissure. In this particular instance the protrusion observed by the patient at once directed attention to the presence of some growth within the rectum; but often no protrusion is noticed, and then the real nature of the case is in greater danger of being overlooked.

In exemplification of this, I may mention the case of a young married lady who was under my care about twelve months ago. She had suffered for many months acutely with symptoms of fissure, and during that time had miscarried, the miscarriage having been apparently brought on by the severe pain and irritation of the anus. Some weeks before I saw her she had consulted another surgeon, who had discovered a fissure, and had made a slight incision through it, at the same time removing an external pile. She was at first relieved by this operation; but as the wound healed the symptoms returned as severely as ever. When I saw her, the remains of the wound were in a highly painful and irritable condition; and, on further investigation, I found a distinct polypoid growth within the rectum, attached about three quarters of an inch higher up. The removal of this, with a repetition of the incision, this time made somewhat freely, completely cured her, and she has had no return of the symptoms. Shortly after the operation, she became pregnant, and she has recently been confined at the full period.

Such a mistake as this is very disheartening to the patient and very annoying to the surgeon. It is, however, not unlikely to happen to any one not familiar with the management of such cases; nor is this the only instance which has come under my notice. It is chiefly with the view to point out this source of error that I bring the subject forward, for the co-existence of the two conditions is not very unfrequent. To avoid mistake, therefore, it is well worth while always to examine the interior of the rectum carefully before operating in cases of fissure. The examination, however, must be made carefully and thoroughly, for the polypus, being very movable, is apt to recede before the finger, and may very easily be missed.

A few years since, Mr. Baker Brown published some cases of this kind (see Lancet, July 14th, 1860, p. 31), which I read with great interest, for his observations on the subject correspond very closely with my own. I cannot, however, quite agree with him in his conclusion, "that a very large number of fissures of the rectum are produced by these little polypoid bodies," and that "they will be found in almost every case if carefully sought for." On the contrary, I am continually meeting with cases of fissure—and indeed they form the great majority—in which nothing of the kind can be discovered after the most careful search. I do, however, not unfrequently find a small excrescence of papilla of mucous membrane at the upper end of the fissure, exactly corresponding to the little inflamed flap of skin so often seen at its outer end; but this is of a different character, and is evidently a subsequent formation—the result, and not the cause, of the local inflammatory action which has been set up. In the cases which I have noted as examples of polypus, and to which I am now alluding, I have only used the term to designate a distinctly pedunculated growth attached to the interior of the bowel, which has had no direct continuity with the fissure, but, on the contrary, has often sprung from the opposite side of the rectum. On enquiring into their history, I have usually found that there has been some irritation about this region for a considerable period, often with loss of blood; but at a later date the acutely painful symptoms have been superadded. The earlier and milder symptoms have without doubt been caused by the polypus;

and this, by continually falling against and irritating the anus, has, in course of time, produced the fissure.

[Mr. Henry Smith wishes to protest against the opinion of Mr. Lane, in speaking of the treatment of hemorrhoids by the clamp as a new operation, and of Mr. Smith as its author. He says:]

I wish I could lay claim to such an ingenious and useful operation. By referring to page 88 of my Lettsomian Lectures, Mr. Lane can see that I have mentioned that late distinguished Dublin surgeon, Mr. Cusack, as the one who suggested the clamp and cautery thirty years ago, and I have related how in this city Mr. Henry Lee had adopted the operation, and how I was induced by the results of his experience to follow it up. The only credit I claim is of having so altered and improved the clamp hitherto used that it seems to fulfil all the purposes desired, both as regards safety and efficiency.—Lancet, July 22, and Sept. 9, 1865, pp. 87, 303.

THE

Galveston Medical Journal.

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VARIÓLA [UMBILIÇA*] SMALLPOX.

This is an eruptive fever—or Exanthemita Pustulata. It is preeminently contagious, and in all probability spreads alone by contagion at the present time.

PATHOGENY.

When, how, and where it first originated, is not well known. The first accounts we have of it are from the Arabians, and in the Arabian army at the siege of Mecca, in the year 569. It raged in Egypt in 640, and was carried by the Sarracens into Italy, Spain and France. It was communicated to the Crusades by the Sarracens, and by them carried into all parts of Europe during the eighth century. It occurs at all ages of life, from the fœtus in utero to the last hours of dissolution of the most aged.

The contagion is specific, and some have imagined that it was produced by animalculæ, but of this there are no proofs. It is more likely a vegetable parasite and it is now classed with the Zymotic diseases. Those produced by a species of fermentation. It is most contagious at the stage of suppuration, but it is believed to be more or less so from the commencement of the fever, and for a long time after the pustules have dried up. The pustules or scabs are believed to retain the poison for an indefinite time, and is only destroyed by excessive heat, cold or moisture.

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*—— We have taken the liberty to add this adjective as descriptive of the disease, substituting it for pettiole or vera. It is truly an umbilicated pustule, and its umbilication alone distinguishes it from other pustular diseases, while pettiole (small) and vera (true) are both misnomas and should be abolished.

DIAGNOSIS.

The fever preceding the eruption may be mistaken for simple fever, measles, scarlatina, or an inflammation of any vicera that may be primarily affected, as acute inflammations, inflammation of the brain, diarrhœa, or diarrhœa hæmorrhagica ; and the patient may die from either of these lesions before the eruption appears ; and may communicate it to other persons in this stage. Several such instances have been reported. Medical students have taken it from the cadaver where there were no pustules.

There is usually more pain in the head and back than in ordinary fever, and in children they are liable to convulsions.

THE ERUPTION

when it first appears, is a red pimple, similar to the petechiæ of typhoid fever, or the eruption of measles. It looks more like a flea bite than anything else. The pimple soon becomes rough and feels like a granule under the fingers. The eyes are usually red and injected but not so much as in measles. The voice is hoarse and rough. When the pustule is well formed it is *umbilicated*, and unlike any other pustular eruption.

VARIETIES, OR DEGREES OF SMALL POX.

It is usual to divide the degrees of small pox—for they are one and the same disease—into the following :

NATURAL VARIOLA.

Discreet—Pustules few and distinct.

Coherent—Pustules occasionally adhere together.

Confluent—Pustules run into one another, and are not regularly circumscribed.

Modified—Varioloid : Small pox after vaccination.

Secondary—A second attack.

INOCULATED VARIOLA.

Variola from the insertion of the pus of a genuine case of small pox, from the patient direct, or from matter procured from such patient.

VARIOLA SINE VARIOLIS.

Fever from contagion of small pox without eruption or pustulation.

PERIODS OF VARIOLA.

These are five :

1. *Period of Incubation*—From five to twenty days. It comprehends all the time between the exposure to infection and the invasion of the disease. In very severe cases the period is short, but in mild cases it is longer. It is not known or recognized by any symptom.

2. *Period of Invasion*—From two to four days. Constitutional disturbance, denoted by languor and lassitude, shiverings, pains in the head and loins. The pains in the loins are referred to the kidneys by M. Chomel, and are deemed by him as pathognomic. Tongue at first usually white, but changes to red edges, and in its confluent variety soon assumes a typhoid type, with sordes on the teeth. The pulse and respiration are increased, and the skin is hot—sometimes dry and at others moist—which is increased at night. Convulsions are frequent and often diarrhœa.

3. *Period of Eruption*—Five days. It is usually ushered in by an increase or exacerbation of all the symptoms, which are at once relieved by the eruption. The pulse becomes full and regular. The nausea ceases, the languor and sense of depression passes off.

The eruption first appears on the lips and forehead and then spreads over the entire face, and from the face to the neck and arms, and from the arms to the trunk, and then the lower extremities, covering the entire body in twenty-four hours.

In the *discreet* variety the eruption comes out in little red points, conical in their form, rough to the touch, and gradually fills up with serum, and then becomes pustules, which are distinct and surrounded by healthy skin.

In the *coherent* they are clustered like rubeola, but in distinct paches or scabs. The pustules occasionally cover or run one on to another.

In the *confluent* variety they are closely aggregated and diffuse a general redness over the entire surface of the skin, which becomes hot, tense and shining. The red spots continue to become conical papulæ (vari.) with red and inflamed bases, with transparent points or vesicles, and these continue to increase to third, fourth or fifth day. They become depressed in the centre, or become umbilicated, which distinguishes it from all pustula diseases, as before stated. A distinct ariola forms around each vesicle on the fourth or fifth day of the eruption, when the vesicle changes to a milky white appearance. The liquor sanguinis becomes lymph and finally pus. This eruption appears on the mucus tissue of the mouth, throat and tongue, producing a coarse, rough voice, and afterwards a cough. Deglutition is painful, respiration difficult, conjunctiva becomes inflamed and the eyelids tumefied. The pustules may be confluent on the face but discreet on the body and extremities.

4. *Period of Suppuration or Maturation*—Commences on the sixth and is completed on the eighth day of the eruption (ninth or tenth from invasion.)

The lymph is changed into pus and the vesicles lose their umbilication, become spheroidal and depressed or flattened, and the white is changed to yellow pustules. At this stage the *secondary fever* rises and continues to the eleventh day, when the pustules burst and the period of dessication commences. The suppuration, as the pimples first appear on the face, and then spread in the same order. This stage is often attended with delirium, cough, hiccough, hemorrhages from the lungs, throat and kidneys. Eyes and face generally swell, and the pustules in the confluent variety form paches. Serum or serious matter exhudes from the base of these pustules, and the nose and face is much enlarged, and the eyelids hide the eyes. The tongue becomes brown and of a typhoid type.

5. *Period of Dessication*—From five to fourteen days. Dessication also begins on the face, and then the neck, and lastly, the extremities. The pustules may dessicate on the face before they form on the extremities. The pustules break and the matter exhudes or the pus dries up into a scab and falls off about the fourteenth day. But often it is the twentieth day before dessication is complete. These scabs continue to fall off, and in the confluent variety they nearly cover the entire face, and when they are about to separate they produce intense itching, and the patient scratches them off and produces black specks from the blood that exudes from the abraded surface. When these scabs come off they leave pits that are red for weeks and then turn white. The whole stage of suppuration is attended with an offensive odor and usually nausea. This odor is peculiar, and to one experienced in it will at once indicate the disease.

INOCULATED VARIOLA.

This is produced by taking lymph or pus from a pure case of small pox and inserting it under the skin, usually near the deltoid muscle. One point is generally sufficient, and in about three days there is a redness around the puncture, and the cuticle is raised and the pimple becomes a papula, and the papula becomes umbilicated, and it forms a pustule in the same manner as pure small pox. It runs through its various stages much sooner. But it is perfect in all its five stages. Sometimes it produces an eruption on the skin—*variola rosiola.* Often the punctures do not show any sign of inflammation for five or six days, and often fourteen days elapse before it begins to appear. Sometimes there is constitutional symptoms without any pustule at the point of puncture. Sometimes the constitutional symptoms are so slight as not to be noticed.

VARIOLA SINE VARIOLIS.

Sydenham describes a Variola Fever that sometimes occurs during an epidemic, but Roger says he never saw such a case. We think it probable, though we have never noticed any such symptoms, and we deem them unworthy of attention.

GENERAL REMARKS ON THE STAGES.

At any time during the five stages acute inflammations may set up ; the brain and spinal marrow may become involved even before the eruption appears. Pneumonia or Hæmorrhages from the throat, bowels or kidneys may complicate the cases. The pustule may from debility become livid and never fill up ; they may not when filled up dessicate, may form sanious matter and the entire skin slough off. The pus may be absorbed and not dry up, which is almost always fatal. Abortions are frequent in the pregnant, and nearly always fatal. Old age is also a great depression, and those who have it after forty-five rarely ever recover. The eyes are often destroyed from opacity of the cornia, stapholoma, amaurosis, &c. The hearing is often affected, ulceration of the ear destroys the otic bones. The skin is often affected with gangrene, especially on the testicles and vulva. Bed sores and sloughs from pressure are common in the confluent variety.

PATHOLOGY.

The above remarks indicate that the pathology and the post mortems correspond to the part attacked by inflammation or congestion. The eruption occurs on all parts of the skin, the mucous tissue, on the trachia, bronchia, in the intestinal canal and over the kidneys in rare cases.

The pustules are peculiar—when closely examined, they are found to be a conglomeration of cells. Each cell is divided into two parts or chambers, and this division is a segment of a sphere, the umbilication is supposed to be produced by the bulb of the hair that passes through it, or by a sebatious gland.

The most probable cause of umbilication is the partial dessication of the first cell formed, which contracts, and adhering to the elevated epedermis draws it inwards. When again this cell becomes pus it bursts and then the pustule is completely formed. Where, as on the face, hands and feet the cuticle is most intimately attached to the dermis, the umbilication rarely occurs, but the pustules become flattened and press down into the dermis, and cause ulceration of the dermis, which sloughs out and forms pits, or pocks.

PROGNOSIS

is also indicated in the general remarks. Uncomplicated distinct Small Pox in young subjects is not dangerous. The complaint is in all its forms and varieties very fatal, especially in the aged, pregnant females, persons debilitated by other diseases or feeble constitutions. Inoculated Small Pox rarely terminates unfavorably or leaves sequelæ of a serious character. It seems strange, but it is nevertheless true, that the contagion directly applied is not so fatal as that taken in an unknown way, and contrary to other poisons when applied endermically, less fatal than when administered, inhaled, or absorbed, while most medicines, when used endermically, are more severe than when taken into the alimentary canal, or inhaled. Small Pox is dangerous in all cases when it assumes an irregular course, and the different stages are not well developed. In mild cases it usually terminates in recovery from fourteen to twenty-four days.

TREATMENT.

In a pure case of Small Pox very little is necessary to be done. It will run its course in spite of all or any treatment; if purgatives are used the bowels are liable to become irritated and hemorrages will follow. The eruption will not appear so full nor run its course so regularly. If stimulants in the first stages be given, we are more liable to have congestion of the brain; so we would recommend that where there is no delirium or diarrhœa nothing should be done, but patient should be allowed plenty of pure free air, plenty of cold water to drink and extremities kept warm. When the pustules are in their papular stage they should be punctured and the serum or pus let out. It is best to puncture with a conical pointed needle, or thorn, as the Mexicans do; this prevents pitting and lessens the secondary fever. When the pustules have been opened, the face and hands at least should be covered with oil silk, with holes for the eyes, nose and mouth. This oil silk may be smeared over with the following :

R. Magnesiæ Carbonatis, xx grs.
Hydr. Chl. Mitis, ss dr.
Bismuthi Subnitratis, i dr.
Glycerin, iv oz.
S. Apply once or twice a day.

If there be much excitement and high fever, the oil silk may be substituted for a piece of patent lint bathed in cold or warm water, as the patient prefers. These should be renewed as often as necessary. This treatment will cure most cases of uncomplicated small pox in middle aged persons without pitting to a great extent. In young chidren it is often necessary to put gloves on their hands to prevent them from scratching off the scabs and causing them to bleed, which by no means should be allowed, though the itching is so intense even in grown persons as to be almost impossible to restrain them. The patient should be allowed generous not full diet.

In the confluent variety these instructions should be more particularly carried out, but in many cases of the confluent variety, especially in old persons, there is great tendency to form serious matter instead of pus, and the cuticle to be as it were lifted off of the cutis vera, and not to form pustules. Where this is the case we should allow generous diet, stimulants, artificial heat, any thing to improve the fibrin in the blood and to sustain the constitution. The sulphites of soda may be given even in staunch doses with good effect, and we have used the sulphate of manganieze with good results, and we think it better than those of magnesia or soda, as it does not purge and is tonic and stimulent. I have thought that where this stage is coming on, to wash the entire skin in a weak solution of sulphuric acid, or which would be better, chromic acid would preserve the skin and prevent so profuse a discharge and thereby preserve the strength of the patient. When the throat is much swollen it should be frequently mopped out with a solution of creosote, chloride of zinc, or chromic acid. Where there is a tendency to typhoid symptoms and hemorrhage, we use turpentine emulsion and tincture of chloride of iron, tannate of quinine, which we think is an admirable remedy in such cases. The patient should in these cases be sustained by every possible means; egg-nogg may be freely allowed—it is both food and medicine. Beef tea, if patient will take it, is good and will do no harm.

The old plan of giving mercury to tyalism with the view of eliminating the poison, has proved as unfortunate in this disease as in that of syphilis, but the new Italian theory of destroying the fermentation or zymotic action of the blood by sulphites have received the sanction of the profession, and is favorably spoken of by Drs. Davis and Fisher, of Chicago, in the 16th vol., page 94, of the transactions of the American Medical Association.

The shutting up the patient in a dark tight room is also objectionable and should not be tolerated. If the eyes be sensitive to light they should be covered with plegets of lint and kept wet, or closed with a bandage.

The complication of inflammation of the brain should be treated on general principles; cold water applied in bladders or bags to the head; small doses of calomel and Dovers powders, aconite and hyoscyamus.

In inflammation of the stomach, mercurial ointment, rubbed over the region of the stomach and colon, small doses of mercury and chalk, frequently repeated.

The same will apply to the lungs where there is pneumonia. Blisters should be avoided in all cases. They are so apt to take on gangrene.

BROMINE AS AN ANTIDOTE TO ZYMOTIC POISONS.

ITS APPLICATION IN THE TREATMENT OF HOSPITAL GANGRENE, SYPHILIS AND SMALL POX.

By E. A. Clark, *M. D.*, *St. Louis, Mo.*

Whilst our materia medica is being constantly enlarged by the addition of new remedies, we are chasing still another which may require long years of experience to prove worthless.

Amongst the remedies that justly claim our consideration, there is, perhaps, none promising so fruitful a field for investigation as the preparations for bromine, which, though for many years known to the profession, has fallen into comparative disuse until recently, when the great emergency for such an agent brought it into use in the treatment of hospital gangrene, that prevailed in many of our army hospitals. And, through the discovery of the effects of bromine in the cure of this disease, other facts of great practical interest have been developed, the most important of which is, that bromine is an antidote to all zymotic poisons. This I have demonstrated to my own satisfaction, and hope that the following detail of cases may influence others, who have not had an opportunity to observe the beneficial effects of this remedy, to give it a further test in a similar class of cases. Although my experience with this drug has been quite satisfactory in the treatment of zymotic diseases, and accords with the experience of others with whom I have conferred, yet there remains much to be discovered in the application of this remedy for the destruction of animal poisons existing either in or out of the human system.

The great analogy existing between bromine and iodine has led many practitioners to regard them as identical, and, consequently, they have been satisfied with their experience in the use of iodine as a correct exponent of the effects of bromine upon the system. Doubtless this is true, so far as the similarity of their mode of action is concerned ; but, in measuring the extent to which they are capable of acting, there will be found a vast difference in favor of bromine, especially in its local application, which I regard as its most effectual mode of administration. Notwithstanding the comparative analogy in the action of these two remedies, there is a difference in their chemical composition, which, though not well understood, is yet sufficiently obvious in their reaction with other substances and upon each other. In accounting for the greater activity of bromine, compared with iodine, upon the system, when applied totally in substance as a caustic, as well as its greater volatility, can be attributed to no other source than their chemical difference, however similar their action may be, when bromine is used in a very dilute solution.

In the application of these remedies to pathological conditions, we cannot administer them indiscriminately, hoping to secure the same results from the use of iodine in severe forms of disease, which may be readily controlled by the use of bromine.

In defining the analogy of these medicines in their application, we may compare them to the different preparations of bark, which, in some mild forms of disease, may be given in substance, cinchona or salicine, in a case of pernicious intermittent in place of quinia, although these substances have a great analogy in their composition and in their effects upon the system, and in mild cases of the same disease will produce similar results ; but, in severe forms of disease requiring the full force of the remedy, quinia could no more be superceded by cinchona or salicine than it could by the simple bitters. Thus the relative value of bromine and iodine, as therapeutic agents, can only be estimated by the comparative results.

But the indications required to be met in the following cases, which yielded so readily to the use of bromine, would have gone on uninterrupted to a fatal termination under the administration of iodine. The greatest similarity in the operation of these medicines is, perhaps, their action upon the glandular and lymphatic systems, increasing secretion and absorption. Though these effects are the smallest results to be gained by the administration of bromine, where other and more active measures are required, yet the superiority that bromine posseses over iodine, as an escharotic, renders it especially applicable in hospital grangene. Bromine also exerts an action on the blood in destroying zymotic poisons, which is not possessed by iodine to the same extent. The greater volatility of bromine, also gives it an advantage in application, which iodine does not possess, as in instances where the fumes of the medicine are required for disinfectant purposes.

The following cases I wish to present in evidence of the facts above stated, though they may not be accepted as conclusive proof in favor of all that is claimed ; yet it is hoped that they will encourage the further use of this remedy by those who are disposed to accredit some of its virtues :

Case No. 1.—Private William Johnson, aged 23 years, wounded on the 10th September, 1863, by a minie ball passing through the right ankle, fracturing the external maleolus and tarsal bones to such an extent as to render immediate amputation necessary, which was performed just above the ankle joint. At the time, and previous to the operation, the patient was in good health, and survived the operation with a speedy reaction. A healthy condition of the stump continued until the fourth day, when the wound began to discharge a thin, ichorous pus, with indications of sloughing in the flap, and a severe lancinating pain in the stump. Pulse 100 per minute, and much more feeble than on the day previous; skin dry and hot, with furred tongue and considerable thirst; loss of appetite and constipation of the bowels were the first symptoms which marked this change in his conditon. I prescribed a saline aperient, followed by repeated doses of morphia, sufficient to relieve the pain, and applied compound tincture of benzine to the wound. The next morning all his symptoms seemed to be aggravated, with the exception of the pain, which was much diminished from the use of the anodyne. The discharge from the wound was sfill unchanged in character, though much increased in quantity; one side of the flap presented an appearance of dislocation and sloughing, while the limb was slightly ædemitous as far as the knee, and its temperature reduced much below that of the body; pulse 120, and much more quick and feeble than on the preceding day; patient had a slight rigor in the night, which, however, soon subsided, followed by an exacerbation of fever and slight delirium, which was followed by a profuse perspiration; the tongue still quite dry, with a red streak through the middle, and an entire loss of appetite, with some nausea and an occasional disposition to vomit; prescribed quinine in five grain doses, every three hours, with tincture of iron and opium, and beef tea as a diet; ordered the wound to be injected with officinal tincture of iodine, and to be enveloped in a warm poultice of charcoal and yeast, frequently renewed.

This treatment was continued until the next morning. The patient rested rather better than during the preceding night, and had suffered but little pain, but was quite delirious. The discharge from the wound was more consistent, but of a very dark color, with dark shreds of cellular tissue, and of an almost intolerable fœtor, which I omitted to state existed also on the previous day. Almost the entire flap was involved in a gangrenous slough, that was removed, and left the end of the stump exposed, which was also covered with a black, fœtid slough, extending some distance into the cellular tissue between the muscles. The œdema of the limb had increased some since the previous day, and was marked above the knee by red streaks following the course of the lymphatic vessels to the groin, where the glands were considerably enlarged and painful to the touch. Pulse increased to 130, and more quick and feeble than the day before; the skin was bathed in a profuse, prostrating sweat; the tongue red and cracked; the eyes dull and sunken, with an anxious expression of countenance; had considerable thirst and no appetite, with an occasional effort at vomiting. The rapid and threatening prostration in his case seemed to offer but little encouragement for further treatment. Applied the following solution to the wound by means of a small sponge introduced well into all the small cavities and intermuscular spaces: R. bromide of potassium, jj dr.; bromine, j oz.; aquæ dist., iv oz.; after which the stump was covered closely with oiled silk, which was allowed to remain several hours; prescribed five grains bromide of potassium in solution, every two hours, in conjunction with milk-punch and essence of beef. Twelve hours later the condition of the patient seemed much improved. Although he had suffered considerable pain in the stump during the day from the application of the bromine, yet the appearance of the wound seemed considerably improved, much of the dead tissue having sloughed off, and the fetor much less offensive; had not perspired so much during the day, and his stomach seemed more retentive. Continued the treatment, with the addition of an anodyne of morphia at bed-time, and a second application of the bromine.

Next morning.—Patient complained of being restless through the night, in consequence of pain in the stump; the fetor of the wound was still quite offensive, though the discharge was more the consistence of healthy pus than on the previous day; the temperature of the limb was increased to about that of the body, and the œdema subsiding; pulse 125, and with more volume than the day before; the perspiration was less profuse and the tongue more moist, with less delirium during the night; the appetite still unchanged, and the bowels rather relaxed. Upon making a more thorough examination of the stump, it was found that the gangrene had extended into the cellular tissue, between the muscles, for some distance beyond where the bromine had been applied. The patient was then placed under the influence of chloroform and the bromine in substance thrown into all the intermuscular spaces and cavities by means of a small, glass syringe, after all the sloughs had been removed by means of a forceps and scissors. The bromine was applied in such a way as to get behind the diseased action and come in contact with the healthy tissues which it cauterized, and at once set up a line of demarkation, exciting a healthy inflammation. After the patient had reacted from the effects of the chloroform, he complained of a severe pain in the stump, which required immediate use of large doses of morphia to control. The constitutional treatment was continued without any change. Twelve hours later the patient was comparatively comfortable, but still suffered some pain in the stump, which had thrown off much of its dead sloughing tissue, and at points presented small surfaces of vital tissue, covered by a more healthy character of pus; with less fetor than at the previous examination; the temperature of the limb was increased above that of the body, with some redness about the margin of the wound; the enlarged lymphatic glands in the groin were still sensitive to the touch, but not increased in size; there existed considerable febrile excitement in the constitutional symptoms, with hot skin and pulse at 120, but much fuller than at the previous examination. Continued treatment, with an anodyne of morphia at bed-time, and a charcoal and yeast poultice applied to the wound.

Next morning.—Condition of patient much improved; some febrile excitement still existing, pulse 115, considerably increased in volume; skin moist, but not perspiring profusely; had but slight delirium during the night. The appearance of the wound was also much improved. Upon removing the poultice most of the sloughs were separated and dropped off, leaving the surface of the stump presenting a healthy appearance and covered with pus, slightly fœtid, and of a light brown color, much more consistent in character than at any previous examination. The red streaks, extending along the course of the lymphatics to the groin, had quite disappeared, and the lymphatic glands were less sensitive to the touch and slightly diminished in size. The skin still presented some redness about the edge of the wound. Continued treatment, with a similar poultice applied to the wound.

Next morning.—Patient still improving; pulse 108, and increased in volume; skin moist, but not perspiring; expression of countenance much more cheerful; relishes food, and has no disposition to vomit. The wound had entirely lost that peculiar gangrenous odor, and presented a clean appearance, with but few shades of sloughing tissue attached, which were removed, and left the whole face of the stump covered with healthy granulations. Continued treatment, with the addition of a saline aperient.

Next morning.—Patient still improving; pulse 100; skin and tongue moist; suffering no pain, and rested well during the night. The stump presented a healthy, granulating appearance, and the swelling quite subsided in the limb, and the lymphatic glands diminished in size. From this date the patient continued convalescent, under the use of tincture of iron, milk punch, and a generous animal diet. After the reparative process had commenced in the stump, it was found to have sloughed away to the extent of about three inches, leaving the bones protruding in a necrosed condition at their ends from a destruction of their periosteum by disease. One inch and a half of the bones was removed, and the remaining surface was soon covered by the soft parts which, in seven weeks, had entirely closed over the ends of the bones, forming a well-shaped stump.

In the progress of this case, it is evident that the alarming constitutional symptoms, were caused by the poisonous material absorbed from the wound, and gained access to the circulation, both by means of the absorbents and vessels in the wound; this was arrested by the action of the bromine, not only in the wound, but also by destroying the virus that had been thrown into the circulation, which I regard as a much more prompt and certain method of the medicine reaching the circulation unchanged, than by its internal administration in any form, as I observed from subsequent experience.

Case No. 2.—Thomas Harman, a Confederate soldier, aged 29 years, received a gun-shot wound in the right heel, three weeks before he came under my charge, on the 15th September, 1863. Upon making an examination of the wound at this date, it was found to have sloughed to such an extent as to leave the os calsis entirely exposed and in a necrosed condition, having been considerably comminuted by the ball, which, by its force, displaced all the tarsal bones, more or less, so that they were all involved in necrosis. In addition to this condition of the tarsal bones, the wound had been attacked twenty-four hours previously by gangrene, involving almost the entire foot. The constitutional symptoms were much the same as those detailed in the last case. The patient was delirious, with a dry, red tongue, and the skin bathed in a profuse, exhausting, perspiration ; pulse 130, quick and feeble, with an anxious expression of countenance and frequent efforts at vomiting. The patient was immediately placed under the influence of chloroform, and the entire os calsis removed, which was done with but little difficulty ; after which the wound was thoroughly washed out and injected with bromine in substance; as in the preceding case, then covered with a warm poultice of charcoal and yeast. After he had recovered from the effects of the chloroform, he complained of severe pain in the wound, which was soon relieved by a dose of morphia. I prescribed thirty drops of tinct. ferri chloridi, every three hours, in conjunction with milk punch and essence of beef.

Next morning—eighteen hours later.—The condition of the wound much improved; most of the sloughing tissue was removed, except at two or three points where the bromine had not seemed to reach beyond the diseased structures ; it was reapplied as before, without the previous administration of chloroform, which, as might have been expected, caused the patient great pain. The constitutional symptoms were also improved ; pulse 126, and increased in fullness ; perspiration less profuse, with some febrile reaction, and stomach more retentive. Continued treatment.

Next morning.—Patient still improving. The wound presented a healthy appearance, with an entire loss of that peculiar gangrenous odor which invariably characterizes this disease. The constitutional condition was also much improved; pulse 115, and increased in volume, skin moist, but not perspiring profusely ; tongue more moist, and a tolerance of food. Continued treatment until next morning, when the patient was found still improving. The wound was entirely clear of any gangrenous condition, and presented as good an appearance as could be expected with such an amount of diseased bone in the foot.

The patient continued to improve from this date until the 18th day, when amputation was performed just below the lower third of the leg, after which the stump healed kindly, and closed up quite as rapidly as though no disease had ever occurred.

Case No. 3.—Private J. M. Mills, 8th Missouri cavalry, aged 22 years, was wounded on the 10th September, 1863, by a minie ball passing transversely through the belly of the gastroenemius muscle. For sometime there was nothing peculiar about the wound except that it was occasionally quite painful and but little disposed to heal, until the tenth day, when the wound was attacked by gangrene, and discharged a dark, grumus pus, exceedingly offensive, and excoriating the skin with which it came in contact. The temperature of the limb was cold to the knee, and discolored for some distance around the sight of the wound. In this case, symptoms of early prostration set in, which seemed to threaten the life of the patient immediately. He soon became almost pulseless, with delirium and an anxious expression of countenance. Treatment: after washing the wound out well, bromine was applied in substance, as before, with a small, pointed, glass syringe forced into all the small cavities and sinuses where the tissues were involved in gangrene. This operation was exceedingly painful to the patient, as I did not deem it proper to administer chloroform in his prostrated condition. After the application of the bromine, the wound was enveloped in a charcoal and yeast poultice. Constitutional treatment: thirty drops tinct. ferri chloridi every three hours, with milk punch and essence of beef.

Twelve hours later.—The wound was still painful, though it presented a more healthy appearance, and the temperature of the limb increased; the force and fullness of the pulse increased, though still at 140 per minute. Continued treatment, except that the tincture of iron was suspended and a solution of five grains of bromide of potassium substituted every two hours.

Next morning—twelve hours later.—The general condition of the patient was decidedly improved; the pulse was increased in fullness, and reduced to 132 per minute; the delirium was also diminished. Upon removing the poultice several large fragments of dead tissue came away, leaving small portions of the wound covered with a granulating surface. The temperature of the limb was also increased, and considerable redness existed on the healthy skin adjacent to the wound. I ordered the poultice renewed and the constitutional treatment continued. But, in about two hours, the nurse reported the patient bleeding profusely, which I immediately discovered was caused from the posterior tibial artery having sloughed off. I at once proceeded to ligate the artery, by applying the ligature in the wound, which arrested the hemorrhage, after having lost in all about ten ounces of blood. From this date the patient began to sink rapidly, and, though stimulants were administered freely, he died in twelve hours from prostration.

Upon a post-mortem examination, a few hours after death, the wound presented the appearance of assuming a healthy condition behind the surface cauterized by the bromine, which had established a well-marked line of demarkation. There existed also, in the right side of the heart, a large, tenacious thrombus, of fibrus tissue attached to the tricuspid valves, and extending into the larger ramifications of the pulmonary artery, where it terminated by free ends. I cannot think, as some suppose, that these thrombi which are so common in hospital gangrene, are the result of post-mortem changes, but changes that are wrought upon the blood by this poison before death.

I will not tax the time and patience of the reader by describing, in detail, the remaining cases of hospital gangrene which I have to report, as the three which I have given are a fair exponent of the remaining twelve cases in which I used bromine with favorable results, in all except two cases. One of these was a man, 55 years of age, who had been suffering with chronic diarrhœa at the time he was wounded, and died of prostration soon after his wound was attacked by gangrene. Although in this case, the bromine, applied as detailed in the above cases, relieved the gangrenous condition of the wound, the patient sank under the first effects of the poison upon his system.

The remaining case, which terminated fatally was one in which gangrene attacked a gun-shot wound of the thigh, the ball fracturing and comminuting the femur at its middle third. Although this patient recovered from the immediate effects of the gangrene under the use of bromine, the great amount of suppuration, and the indisposition to union of the fracture, exhausted him, and he died in ten days from the time his wound was attacked by gangrene.

In all these cases the bromine was applied in substance in the manner described above, though in four of them a second application of the remedy was required, but not in substance—a solution made in the proportion of two drachms to one ounce of a saturated solution of bromide of potassium was sufficient to meet the indications requiring a second application of the remedy. The constitutional treatment was also pursued in all these cases excepting five, in which the muriated tincture of iron was administered instead of bromide of potassium, and apparently with as good results.

But it would seem reasonable to suppose that the internal administration of bromine ought to be as effectual on the system as its local application, which, doubtless, it would be if it were absorbed so rapidly and taken into the circulation in as concentrated a state, without any change in its chemical composition, as, perhaps, some change may occur in its chemical reaction with the juices of the stomach when taken internally, which may render it more inert in producing those changes upon the poisonous material existing in the blood in this disease. One thing, however, is quite certain—that, when administered internally, the medicine must be in a much more dilute state when it reaches the blood than when taken up from its point of local application. But of its efficiency, when administered internally, I can say nothing more than the results of my experience, as stated above.

I am aware that some who have made use of bromine as a remedy in the treatment of hospital gangrene have not derived satisfactory results in all instances; but I am inclined to the opinion that in most of the cases in which it failed to arrest the disease, when used sufficiently early, was in consequence of the imperfect manner of its application—many practitioners feeling satisfied with its superficial application to the diseased surface, leaving a stratum of dead tissue between it and the vital structures, which of course would prevent the absorption of the medicine as well as its contact with the entire mass of poisonous matter existing in the wound, which is taken up constantly by the blood. The remedy should be applied so as to entirely destroy the diseased tissues in the wound, and thereby destroy the virus which is constantly inoculating the system. To accomplish this purpose the remedy should be inserted thoroughly beneath all the diseased structures, by means of a glass syringe, so as to bring it in contact with the vital tissues beneath, and thereby facilitate its absorption into the circulation in order that it may destroy so much of the virus as may have been taken up. Besides, there should be another important object in view—i. e., to establish a healthy inflammation in the tissues beneath the diseased structure, and by that means establish also a line of demarkation at once. I prefer to use the bromine in substance in hospital gangrene, because it cauterizes the tissues beneath the diseased structures more thoroughly, and prevents the contact of the virus with the healthy tissues.

In addition to the use of bromine in hospital gangrene, I have also used it as a local application in the treatment of syphilis. My experience with the remedy in this disease has not been sufficient, however, to warrant the expression of a positive opinion in its favor, as I have only used it in three cases, one of which was an indurated chancre, to which the bromine was applied in substance the first time, and subsequently in the following solution: R. bromine, ss dr.; bromide of potassium, jj dr.; aquæ dist., j oz.; M. This solution was applied to the chancre once every other day until four applications were made. During this time, however, the patient had taken mercury to the extent of producing slight ptyalism, which was persevered in until the chancre had quite healed, requiring in all fourteen days. In this case there was no appearance of bubo or secondary symptoms within the space of two months, since which time the patient has not been heard from.

The remaining two were cases of soft chancre, to which the bromine was applied in the following substance: R. bromine, j dr.; bromide of potassium, jj dr.; aquæ dist., j oz.; M. This solution was applied to the chancres once daily, requiring in one five, and in the other six applications of the remedy, during which time the patients were kept upon the use of prot-iodide of mercury to the extent of producing slight ptyalism. In ten days both patients were discharged, cured without having had bubos, and, when last heard from—one month later—no secondary symptoms were manifest in either case.

But in these cases, having used bromine in conjunction with mercury, we cannot say how much of the beneficial results may be attributed to the bromine. But the results in these cases were so satisfactory that they did not disprove our reasons for using the remedy, believing it capable of destroying the virus of syphilis, as well as that of hospital gangrene. At all events, we think the remedy well worth the consideration of the profession in the treatment of this disease.

As a further evidence of the antidotal properties of bromine to zymotic poisons, I ordered it to be used in two cases of small pox, which were admitted to the hospital in the versicular stage. In these cases the remedy was used with a view to abort the disease, if possible, and to prevent the pitting by aborting the pustules on the hands and face, which was done in the following manner: a solution containing one drachm of bromine to an ounce of a saturated solution of bromide of potassium was prepared, and into this solution was dipped a sharp-pointed, hickory stick, with which the vesicles were punctured as soon as they made their appearance, which, of course, required the attention of one person constantly; and, as the task was somewhat irksome, the man whom I detailed to perform the duty became negligent, and after the first few hours, omitted to use it except on the face, neck and hands, where it entirely absorbed the pustules, and left the skin perfectly clean and smooth after convalescence. While on the remainder of the body there was a large crop of pustules; but they were all small and imperfectly formed—many of the vesicles subsiding without forming pustules at all. The secondary fever was also very slight, and seemed equally as much modified as the pustules were. It may be said, however, that these cases might have been equally modified without the use of bromine; but this is hardly reasonable to suppose, when a great number of vesicles made their appearance on the surface where the bromine was used, and, by its use, were aborted. Besides, the constitutional symptoms in each case, as well as the primitive appearance of the vesicles, indicated a severe form of the disease, if not the confluent variety. Yet, we will admit that all the apparent modifications of the disease may not have been dependent upon the use of the bromine. But that it exerted some influence in modifying the disease is certain; and this fact alone is sufficient to entitle the remedy to a further test in this disease, which we believe it modifies by its destructive action upon the virus, whether it be brought in contact with it in the vesicle or in the blood after it is absorbed. Some other collateral incidents also convince us that bromine does exert a specific action upon the virus of smalll-pox to render it inert.

During the past winter we admitted a negro woman to the hospital who was thought to have small-pox, which, in thirty-six hours, was verified by the eruption. This woman had two small children who had never been vaccinated, and, having no one to take care of them, they were admitted to the hospital with their mother. They all occupied a small room with one other patient, and, not being able to procure any good vaccine virus, we thought to protect the children from the disease by placing open dishes about the room filled with a solution of bromine sufficiently strong not to be offensive to the patients. The mother recovered in the usual time and was discharged with her children, who never had a symptom of the disease. Yet, it may be said that these children might not have taken small-pox without the use of bromine, which we admit to be true; but the probabilities are, that they would have taken it. Had they been vaccinated, we would have said at once that that protected them; but, as they were not vaccinated, it is equally probable that they were protected by the bromine. Soon after this we had occasion to transfer some blankets to a fever ward, which had been used for several months in the small-pox wards; but, before taking them into the ward, they were suspended in a small, tight room for five days, with several open dishes of bromine placed beneath them, so that the entire atmosphere of the room was kept constantly saturated with the fumes of the bromine. The blankets were then put in use upon the beds without the appearance of a single case of small-pox in the ward afterward. Hence, it may be inferred that bromine may also exert some influence in destroying the contagion of small-pox as well as modifying the force of the disease after its inception. But there still remains much to be developed in determining the fact before it is entitled to the credence of the profession; yet with these hints, it is hoped that others may be encouraged to search for more virtues in this remedy.—*St. Louis Medical and Surgical Journal.*

REPORT OF THE COMMITTEE ON THE INTRODUCTION OF DISEASE BY COMMERCE,

AND THE MEANS FOR ITS PREVENTION.

The migratory nature of epidemic diseases, which has so often been compared to that of certain insects or birds, will, upon examination, be found to be based upon fancy rather than fact; that there is, in general, no such adaptation of the same epidemic to far different, however distant, localities.

Diseases which in the days of Viscount Bernabo were supposed to be erratic, and constantly on a voyage of discovery for some new port of entry where his vigils were not kept, under the present advanced state of medical and meteorological science are known to have spread from their usual habitations only under the most favorable auspices, and to such places as were characterized by conditions closely resembling those in which they had been domiciled. These conditions may be regarded as the remote causes of diseases, and are, in general, immutable; and wherever these causes habitually exist, there, of all places, are exciting causes most likely to usher in epidemics. When epidemics are thus once planted, their diffusion by atmospheric agencies is co-extensive with the locality and the duration of favorable climatic conditions.

In order to form correct conclusions on the etiology of epidemic diseases, it is unnecessary that we measure the scope of our inquiries by their prevalence in numerous places and under apparently different circumstances.

As a starting point, it may be stated as a truism that the three great epidemic diseases, plague, cholera, and yellow fever, are ordinarily to be found in their greatest intensity, at certain seasons, at the three great deltas of the Nile, Ganges, and Mississippi.

These places have certain attributes in common. Great beds of alluvium, filled with the organic remains of plants and animals festering under a tropical sun, constitute sources of disease varying in intensity with meteorological cycles and population. In all alike, too, at certain seasons, when these climates bear the greatest resemblance to each other, malarious diseases of the same type—intermittent, remittent, and bilious fevers, diarrhœa, dysentery, and hepatic derangements—prevail.

Their *different* attributes appear in the natural history of the regions whence these *sunderbunds** are collected. That the lees and slime from the table lands of Abyssinia and the adjacent country of the tributaries of the Nile, which have for thousands of years been accumulating in the lap of Egypt, should possess attributes different from the Himalayan snow waters of the Ganges and its congeries, which, on reaching the Hoogly, are consecrated by being made the depository of the dead, is no less reasonable than probable. Then, again, of the Mississippi delta. The interminable swamps of Northern Minnesota, spreading out and finally uniting in a sluggish stream, which for the first three hundred miles of its course can scarcely be regarded as anything more than an extensive marsh drain, that for more than a thousand miles further on is fed by numerous tributaries from limestone bluffs, and finally swallows up the great streams which drain the Rocky Mountains on the one side and the Alleghanies on the other, containing the gleanings of a river plateau unequaled elsewhere in the world—that such a body of water, from such an area, should contain material of different attributes, in relation to disease, from the Nile and the Ganges, is, to say the least, highly probable.

But there are other differences more manifest—the different meteorological conditions, and the different habits of the people.

Meteorology is no longer the vague and uncertain science that it was during the time of the great epidemics of the middle ages ; and, like other advanced sciences, while it lights up the future with new rays of hope, it reflects upon the past. Humboldt, with his accustomed sagacity, has remarked that the most favorable cause for the development of epidemics is to be found in a uniform and long-continued type of meteorological phenomena. For example, in the case of the plague, it is after a lengthened duration of the same temperature and of the same winds that the pestilence in an epidemic form has been observed to break out in Egypt, Syria and Constantinople.

It may be readily believed that when a population has lived for a lengthy period of time in the same condition of climate and alimentation, the system of each individual becomes profoundly modified in the same manner, and may be disposed to receive, or even develop spontaneously, the same disease.

The water of the Nile, for six months in the year, is so thick that it must have time to settle before it can be drunk ; and, at all times, people of delicacy have to perfume and cool it by evaporation before drinking, while in no country in the world is so much water used as in Egypt. The first thing an Egyptian does on entering a house is to take a hearty drink of water. Towards the end of the hot season, in February, the *kamsin* begins to blow. This lasts about fifty days, blowing in intervals of not more than three days at a time. During the *kamsin*, the atmosphere, which is at other times clear, becomes so loaded with dust as to be almost dark; dust penetrates everywhere, and all nature is dried up by the intolerable heat. The skin becomes exhausted of perspiration, and is parched almost to a crisp. Respiration is oppressed, and intolerable thirst seems to threaten the very existence of life. In June the inundation begins, and ends in September, sometimes a little earlier or later, and the plague always varies in the same degree. It arises as the Nile subsides, and prevails until the following June, when its ravages cease and remain in abeyance during the season of intense heat, to be again called into existence in the autumn.

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* The delta of the Ganges extends over an area of three hundred by two hundred miles composed of low alluvial islands and marsh, covered with underwood named *sundry*, whence the tract is called *sunderbunds*.

In Upper Egypt, where the waters of the Nile are confined between its banks, and where the soil is of a stable nature, the climate is salubrious. In certain other parts, where the soil is argillaceous and subject to inundation, instead of plague, intermittent and remittent fevers prevail in their most malignant forms. The habits of the Egyptians, all observers concur in describing as filthy in the extreme. They live in small, damp, closely-crowded huts, thick with the odors of their own personal impurities mixed with those of the heated marshes; and here cook their scanty stale meats and fish, over fires made of dried manure. Ignorance, despotism, and poverty combine to make them in all respects a degraded people.

The hygienic conditions of other prominent localities with which the plague is identified in history will, almost without exception, be found to bear some resemblance to those of the delta of the Nile. At Constantinople, as at Cairo, before the plague ceased to be almost an annual epidemic, the filth of its environs was intolerable, and disgusting in the extreme. And with the annual setting in of the *sirocco*, when the putrefaction of all organic matters was most active, the pestilence generally made its appearance. The same is the case with Erzeroum.

At Moldavia and Wallachia, on the Danube, the poorer classes are known to live in the greatest misery and filth, and in both of these places, after the excessive heats of summer, malignant intermittent and remittent fevers generally prevail, and are succeeded by plague. And the same is the case with the plague-spots of Syria and other plague countries of the present day, no less than it was with London in the seventeenth century.

For more than a thousand years after the Christian era, great calamities of famine and pestilence are constantly recorded as prominent features of the times. They were both owing to the same cause —*excessive rains and inundations, followed by drought and high temperature.* The plague is known to have advanced from the confines of China, across Thibet and Persia, to Southern Russia, and thence spread itself over almost every country in Europe. But there went before it great floods and torrents, causing such inundations in the valleys as had never been heard of before. Italy, Sicily, Cyprus, Spain, Germany, Holland, England and Ireland all were deluged and heated by a cycle of meteorological conditions no less rare in its visitations than the plague which followed in its train.

In 1592 there was such a drought in England that the Thames was fordable, and the autumn was exceedingly sultry. It was followed by plague. Seventy years later, the same meteorological conditions in Spain and Portugal were also followed by the plague. And the great plague of London, in 1665–6, was, it is well known, preceded by an unusually wet winter, early spring, and an excessively hot and long summer.

In 1844 the Royal Academy of Medicine in France appointed a commission to examine all the varied questions connected with plague and quarantines. This commission was composed of MM. Adelon, Begin, Dubois, Dupuy, Ferrus, Londe, Melier, Pariset, Poiseuille, Prus, and Royer-Collard, all men of the highest professional and scientific attainments. The commissioners were engaged in their deliberations for over a year, and had every facility granted them by the French government, to render their inquiry complete and accurate. At length their report was drawn up and presented to the Academy. Among the most important of their conclusions are the following :

"The plague has been observed to arise spontaneously, not only in Egypt, Syria, and Turkey, but also in many other countries of Africa, Asia, and Europe."

"In all countries where the spontaneous plague has been observed, its development may be reasonably attributed to certain determinate conditions acting upon a large portion of the inhabitants. The principal of these conditions are, residence upon marshy alluvial soils near the Mediterranean, or near certain rivers, as the Nile, Euphrates and Danube; the dwellings being low, crowded, and badly ventilated ; a warm and moist atmosphere ; the action of putrescent animal and vegetable matters ; unwholesome and insufficient food ; and great physical and moral wretchedness."

"All the producing causes of the plague being found united in Lower Egypt, the disease is endemic in that country, where it is seen every year in the sporadic, and about every tenth year in the epidemic form."

"The plague, abstractedly from the influence which the infected may exercise, spreads itself after the manner of most epidemic diseases, viz: by the action of general causes."

In reply to the question, "*Is the plague transmissible by inoculation either of the blood drawn from a vein, or of the pus from a bubo, or of the serosity from the phlyctena of a carbuncle?*" M. Prus observes that "it is obvious that if the plague be truly a virulent disease (*a virus fixe*), the possibility of the inoculation of its virus would approximate it to epidemic contagious diseases; whereas if it does not furnish any principle, liquid or solid, that is susceptible of being inoculated and of producing a virus similar to that which gave it birth, the disease must be withdrawn from the class of diseases that are properly contagious, such as small pox, and would approach, in this respect, the character of typhus, which is propagated by peculiar miasmas, but which gives out no inoculable element."

The *conclusion* of the commissioners upon this important point was, that "the results of the inoculation of the blood drawn from the vein of a plague patient, or from the pus of a pestilential bubo, have been equivocal; the inoculation of the serostiy taken from the phlyctenæ of a pestilential carbuncle has never given the disease. It is, therefore, not proved that the plague can be transmitted by inoculation, even under the influence of a pestilential constitution."

"On the one hand, immediate contact with thousands of plague patients has not been followed by any dangerous consequences to those who have been exposed to it in the open air, or in well-ventilated chambers; and on the other, that there is not a single fact which indisputably proves the transmissibility of the plague by mere contact with the sick."

"Very numerous facts prove that the clothes and effects belonging to plague patients have not communicated plague to persons who have used them, even without any previous purification. The facts which seem to indicate an opposite result can only be considered valuable, if they are confirmed by fresh observations made beyond epidemic *foci*, at a distance alike from *foci* of miasmatic infection, and from countries where the plague is endemic."

"*In epidemic foci* the plague is transmissible by the miasms which emanate from the bodies of the infected, and by the foci of infection thereby produced."

"It is indisputable that the plague is transmissible beyond or away from epidemic foci, whether on board vessels at sea, or in the lazarettos of Europe."

"There is nothing to prove that articles of merchandize can transport the disease beyond epidemic foci."

"The transmission of the plague by pestilential miasms is a proved fact."

"The transmission of plague by immediate contact with the infected is not a proved fact."

"If it has been proved that the existence of a pestilential constitution in a country into which the plague is imported, is necessary for the transmission and propagation of the disease, it seems nevertheless certain that imported plague will not exercise any great ravages if it does not meet, in the charachter of the climate, atmosphere, and population of the place, with the conditions that are favorable for its development."

CHOLERA.—Since the year 1832, when the cholera may be said to have commenced a tour of the world, it has never wanted for historians, nor have these wanted for disinterested readers. Every possible modification has been delineated and recounted with a prolixity and minuteness only to be accounted for, by its menacing attitude to each individual writer. Known to be endemical in India by the most anciente historians of that country at all times, and to have been described by the ancient authors of other countries and places combining the localizing causes and meteorological conditions more or less similar to those of the delta of the Ganges, it is not deemed necessary to go extensively into its history. It will suffice to state that, according to the testimony of all observers, its chief predisposing causes are animal and vegetable matters in a state of decomposition, dampness, moisture, filth, high temperature, and crowded, ill-ventilated apartments. That it is most virulent in low-lying districts, on the banks of rivers, in the neighborhood of sewer mouths, and wherever there are large collections of refuse, particularly amidst human dwellings that are thus situated. That such conditions as these predispose to epidemics of every kind, in no respect vitiates their application to cholera. It may not be, it *is not* within our power to point out what the peculiarity of the climatological cause is that so constantly exists at the delta of the Ganges as to excite cholera there in consequence of the peculiar local causes so greatly itensified ; nor is our chemical knowledge equal to the task of pointing out from analysis why a different result should be obtained by the climatological and local influences of the Ganges from those of the Nile. Such, however, is the fact, and as such we are obliged to admit it. And so, too, in regard to the meteorological conditions which precede or accompany cholera in unusual places. Our inabiiity to appreciate chemically the influeuce of the still, heavy air, which so generally prevails just before or during cholera epidemics, in its peculiar effect upon localizing causes, is precisely analogous to the same differences on a large scale, as at the deltas. We are forced to accept the result as a demonstration of different properties.

Wherever this state of climatological influences exist together with the localizing causes predisposing to cholera, there is a *foci* of the disease, where it is more liable to originate spontaneously than to receive it from other places. No one, however, can question, in view of all the facts that have been elicited in the history of cholera, that into such a place cholera may be introduced. John Simon, Esq., in his Annual Report to the City Commissioners of Sewers, of London, 1854, whilst he appears to consider the introduction of a ferment from without to be requisite for the production of cholera, says: "The specific migrating power, whatever its nature, has the faculty of infecting districts in a manner detrimental to life, *only when their atmosphere is fraught with certain products susceptible, under its influence, of undergoing poisonous transformation.* . . . Through the unpolluted atmosphere of cleanly districts it migrates silently without a blow ; that which it can kindle into poison lies not there. To the foul damp breath of low-lying cities it comes like a spark to powder. Here is contained that which it can quickly make destructive—soaked into soil, stagnant in water, griming the pavement, tainting the air—the slow rottenness of unremoved excrement to which the first contact of this foreign ferment brings the occasion of changing into new and more deadly combinations."

Yellow Fever.—It is unnecessary for the purpose of this paper to discuss whether yellow fever was first discovered in America, or originally imported into it. We know from the history of the times that, in the latter half of the seventeenth century, when England was moved to the adoption of quarantine regulations for keeping out the plague while she was nursing it at home, her colonists in America were similarly exercised in regard to a *new* plague in the West Indies.

Among the attributes of patriotism, the defence of one's home is everywhere an acknowledged virtue. And it is perhaps no disparagement to medical men generally, that they are too apt to exert themselves to show that diseases originating in their own neighborhoods have had their origin elsewhere. "In all climates," says Humboldt, "men imagine they find some consolation in the idea that a disease reputed pestilential is of foreign origin. As malignant fevers are easily engendered amid a large crew, heaped up in filthy vessels, the commencement of an epidemic dates pretty often from the arrival of a squadron. Then, instead of attributing the evil to the vitiated air contained in vessels deprived of ventilation, or to the effect of a hot and unhealthy climate on newly arrived sailors, people affirm that it has been imported from a neighboring port, where the vessels in the convoy have touched, on the passage from Europe to America. It is thus that we often hear it said in Mexico, that the vessel of war, in which such a viceroy has arrived in Vera Cruz, has introduced the yellow fever, which had ceased to reign for some years past ; it is thus that during the hot season, Havana, Vera Cruz, and the ports of the United States mutually accuse each other of being the source of the disease by which they are visited."*

The history of yellow fever is contemporary with certain commercial ports in America. That in numerous instances it has been introduced by shipping, in which it has originated spontaneously, or been transported in the material of commerce from other places cannot be questioned by any one who will take the pains to become acquainted with its history. Everywhere, however, in its origin, extension and limitation, it is circumscribed by localizing causes and meteorological influences, such as exist in their greatest intensity, at certain seasons, at the delta of the Mississippi. These are localizing influences more or less approximating to those of this great delta, and a range of about 80° temperature for several weeks or months.

In *every locality where the yellow fever is endemic, arises spontaneously*, or *is capable of being introduced*, the thermometer gives us an average heat of about 80°, usually characterized by great steadiness of temperature day and night. It would be useless to extend this paper by a category of the places at which yellow fever is wont to prevail, according to the conditions of the delta of the Mississippi. For details, refer to the great work of La Roche on Yellow Fever, which is replete with data illustrative of the ground here taken.

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* Essai Politique sur le Roy. de la Nouv. Esp. La Roche on Yellow Fever, vol. ii, p. 200

Since yellow fever appeared in the Brazils, about sixteen years ago, it has extended over the entire Gulf of Mexico, the West Indies, and to the most of the Southern States, and finally to the Pacific Coast. But all the while it has clung with remarkable tenacity to regions and localities remarkable for general resemblance, for the time being, at least, in local and climatological conditions.

In 1851–2, it is well known, the harbor of Rio Janeiro was crowded with infected vessels, many of them destined for the Pacific. How many of them arrived there still infected, and touched at places where yellow fever soon after, for the first time, prevailed, we have no means of knowing. But a few have been traced. About the middle of the year 1851, the steamer "New World," on her way to California, touched at Callao, after having lost almost her whole crew by yellow fever in Rio. The steamer "Quito," also, during the same season, lost several of her crew, proceeded to the Pacific, and arrived at Callao in April, 1852. The first German emigrant ships arrived in Callao in December, 1851. During the early part of the year 1852, a mild form of fever broke out in Lima, and along the coast of Peru, which the natives called "pelusa," just as, in 1849, the precursory form of fever which prevailed at Rio was called "polka." From this nucleus the disease speedily developed itself into a perfect type of yellow fever, and has become domiciled.

June 6, 1855, the steamer "Ben Franklin," arrived at Norfolk from St. Thomas, where she had been several months during the prevalence of yellow fever, and had lost several of her crew with the disease, and had also lost two or three on the voyage to Norfolk. But at the time of her arrival she had no one on board sick with it.

On the 5th day of July a man, who had been working on the boiler of the "Ben Franklin" two days before, was taken with the fever and died on the fourth day of the disease. This was the starting-point of the fever which subsequently prevailed so extensively at Portsmouth and Norfolk.

In October, 1857, the U. S. Steamer "Susquehanna" was ordered from Spezzia to San Juan de Nicaragua, where she arrived early in December; having touched by the way at Genoa, Madeira and Key West. She remained at San Juan until the first of the following April, having had during the whole period of time she laid there a constantly enlarging sick list of a precursory fever. At first intermittent, then remittent, but all recovering until the 20th of March, when a case became malignant and died.

The ship put to sea April 1st, and on the 5th arrived off Port Royal, Jamaica, with one hundred and six officers and men down with yellow fever. Most of these were sent to the hospital, and on the third day afterwards, she sailed for New York, where she arrived on the 15th with fifty on the sick list.

The remarkable feature in this instance is, that at San Juan, where the yellow fever first appeared on board the "Susquehanna" *spontaneously,* there was no yellow fever, and the disease has never been known to occur there. It was, doubtless, very fortunate for the place that the "Susquehanna" left so soon. The circumstance is an example of the peculiar liability of a ship, even above the most favorable conditions of shore, for the spantaneous origin of the disease. The same thing has been exemplified in numerous instances. Indeed, there is good reason to believe that the pent-up condition of a ship's crew in a climate predisposing to yellow fever, or any other epidemic disease, increases the danger independently of the still air confined between decks.

The above examples illustrate alike the conditions of spontaneous origin, transportation, and introduction of yellow fever. Other examples might be cited, but they are deemed unnecessary.

TYPHUS.—This disease differs remarkably from all of the others considered, as regards temperature. It is but little known, and incapable of being introduced, under either extreme of temperature, except under long continued defective medical police. Where the mean annual temperature rises above 62° or falls below 40°, typhus fever rarely prevails. And a continued temperature for a length of time above or below these extremes, generally puts a stop to its progress. As an epidemic of the British Isles it is prone to arise from the mere accumulation of the effluvia given off from the human body, whenever masses of people are crowded together in a narrow space, while cleanliness and ventilation are at the same time neglected. Hence it is frequently present in crowded prisons, badly constructed hospitals, and emigrant ships. The risk of infection from typhus is, *cœteris paribus,* almost exactly proportionate to the impurity of the air—the cause which gives rise to it—and the disease seldom or never spreads when the sick are removed from the original *habitat* of the evil, and placed in clean and airy dwellings. It is capable of spontaneous origin, of being transported and of being introduced into new places on the same conditions as plague, cholera, and yellow fever, respectively, viz: under those circumstances and into those localities which are capable of producing the disease. That typhus owes its existence to the joint influence of certain localizing causes and meteorological conditions appears to be no less certainly the case than that of plague, cholera, and yellow fever. Indeed, if it were possible to apply the meteorological conditions of any one of these diseases to the localizing causes of the other, it seems to be probable that one could be changed for the other. And that, therefore, the conclusions of the French commission in regard to plague, are equally applicable to cholera, yellow fever, and typhus, excepting only the meteorological conditions of origin.

In concluding this inquiry into the localizing causes and meteorological influences governing the introduction of disease by commerce, the indications for its prevention are manifest.

In regard to certain regions and places of great magnitude, where the causes and conditions of epidemics are indigenous, or have become thoroughly acclimated, there appears, indeed, to be but one remedy, viz: keep as clear of such places during the dangerous season as possible. But in regard to other localities, where any of the conditions are artificial, our duty is clear—attack the removable causes, *do away with epidemic foci*, on the one hand by civic cleanliness; and prevent the introduction of disease on the other, by *disinfection*. To enter into these secondary questions, *seriatim*, it is evident would extend this paper to an inordinate length.

[As a continuation of the subject of Small Pox we insert the following, and call the attention of Physicians to its great importance.]

PROTECTION FROM SMALL POX BY MEANS OF VACCINATION AND REVACCINATION.

YOUR Committee report progress. As soon as practicable, they prepared the following paper :

" At the annual session of the American Medical Association held in New York, June, 1864, the following resolutions were adopted, and the undersigned appointed a Committee to carry them out :

' *Resolved,* That the Association deems it a duty to institute measures looking to the vaccination, ultimately, of every person living in the limits of country over which it exercises influence.

' *Resolved,* That a Central Committee of five be oppointed to enlighten the public mind, by all available means, upon the value and necessity of universal vaccination.

' *Resolved,* That the Central Committee be authorized to appoint associate and auxiliary committees in each State.'

"According to the most reliable statistics obtainable, the annual death-rate of the United States is about one in forty-five of the whole population, or about 600,000 annually for the last ten years. Of this number of deaths from all causes, about one in every two hundred and fifty, or in round numbers, not less than 2,500 die annually of smallpox. This mortality, estimated by the usual ratio of deaths in smallpox, demonstrates the existence of more than 10,000 cases of unmodified smallpox annually in the United States, exclusive of varioloid, all of which can be wholly prevented by effectual vaccination and revaccination. During the great epidemics of smallpox which prevailed in Europe during the early part of the present century, all observers had abundant opportunities for ascertaining the true value of vaccination. The vaccinated, and those who had previously had smallpox were both found to be more or less subject to the disease. Early in the progress of these epidemics, however, an important fact became evident, namely, that there was a great difference in the mortality of smallpox when it attacked these three classes : 1. The vaccinated ; 2. The variolated ; and 3. Those who had neither been vaccinated nor had smallpox. Of the first class, those who had been previously vaccinated, out of every 330 attacked, only 1 died. Of the second class, those who had previously had smallpox, 1 out of every 50 died. While of the third class, those who had neither been vaccinated nor had smallpox 1 out of every 4 died. Thus proving the great superiority of vaccination over smallpox itself in protecting the system from the fatality of a second attack.

"Unmodified smallpox is not only a very fatal disease, as proved by its frequently cutting off one-fourth of all whom it attacks, but its tendency is to develop any latent disease which may exist in the constitution, particularly scrofula, and it is thus indirectly the cause of death to a much larger portion of the human race than at first sight appears. It is not, therefore, surprising that smallpox, attacking for the second time an already enfeebled constitution, should cause a greater proportion of deaths than takes place when it occurs after vaccination, a much milder form of the same disease, and, therefore, proportionately less likely to develop any pre-existing constitutional affection.

"It may, indeed, be truly said that during the last sixty-four years vaccination has not only prevented millions of cases of smallpox, but that it has also saved a multitude of persons from scrofula and other fatal maladies.

The human race has become stronger, has produced more hardy offspring, not only suffering less from disease in general, but in all respects more capable of resisting it, through the instrumentality of vaccination.

"Among the earliest objections urged against vaccination, even during the time of Jenner, was the alleged danger of communicating other diseases with the vaccinia. And from that day to this, cases of cutaneous disease, syphilis, scrofula, etc., have been occasionally attributed to this cause. But if it were now possible to collect all such cases, even then their utter insignificance when compared with the multitude that have unknowingly been vaccinated with lymph taken from diseased persons, without contamination, is such that this evidence alone against the transmissibility of other diseases by vaccination would be sufficient to establish the conclusion, as a general rule, that *there is no danger of communicating other diseases with vaccinia.* This conclusion is in keeping with the recorded experience of Heim, Ricord, Bousquet, Taupin, Landoury, Friedinger, and many others who have investigated the subject, and may, indeed, be regarded as an accepted truth by the most distinguished men of the medical profession.

"The recorded facts, the arguments, and deductions made by investigators in reference to the possibility of transmitting other diseases with vaccinia, added to the facts, positive and negative, which have been presented under our own observation, not only confirm our belief in the non-transmissibility of other diseases with vaccinia *as a general law,* but demonstrate that vaccination, besides preventing smallpox, frequently fortifies the constitution of the individual against some of the worst of those very diseases which are erroneously alleged to be transmitted by it. We would not, however, be understood as approving of the use of vaccine virus obtained from diseased persons; but, on the contrary, *none should ever be used knowingly except that which has been obtained from perfectly healthy subjects.*

"The protective powers of vaccination are most evident in their results to mankind in general. The comparative exemption of all civilized communities, for the last forty years, from the most terrible scourge to which mankind was ever liable is an evidence of the protection afforded by vaccination so overwhelming as to characterize the discovery of Jenner as the greatest boon ever conferred upon the temporal welfare of man.

"In England alone, for nearly a century before the introduction of vaccination, no fewer than 30,000 persons were annually cut off by smallpox; which, in the same ratio, according to the present population, would be equivalent to 100,000 deaths annually. Out of every 1,000 deaths, from 1750 to 1800, there were by smallpox 96; from 1800 to 1850, there were, for the same number, but 35.

"In Germany, for the same periods of time, there were, out of every 1,000 deaths for the former period by smallpox, 66.5; for the latter period, 7.26.

"In Sweden, for the last twenty-eight years before the introduction of vaccination, out of each million of the population there were 2,050 deaths annually by smallpox; for forty years subsequent to the introduction of vaccination, the number of deaths annually by smallpox, per million of inhabitants, was 158.

"In Westphalia, from 1776 to 1780, the annual smallpox death-rate per million of inhabitants was 2,643; from 1816 to 1850, it was 114.

"In Copenhagen, 1751 to 1800, the annual rate per million was 3,128; from 1800 to 1850, it was 286. In Berlin, for the same periods, the rates relatively, were 3,442 and 176.

"American statistics, so far as known, are equally conclusive. According to a paper read by Dr. Robert Ware, before the Boston Sanitary Association, we learn that in Boston, in 1721, the year in which inoculation was introduced, and when the whole population was 11,000, 5,759, or more than one-half, had smallpox, and of these 844 died. In 1730 there were 4,000 cases and 200 deaths. In 1752, when the population was 15,684, there were 5,545 cases and 539 deaths. In 1764 there were 5,646 cases; in 1776, 5,292; and in 1792, 8,346. Compared with a subsequent period, after the general introduction of vaccination, and when it was in a measure compulsory, from 1815 to 1830, the mortality from smallpox was only *fourteen*; from 1811 to 1839, it was but *fifty-two*.

"By an approximate average death-rate by smallpox per million of living population, from 1750 to 1800, and from 1800 to 1850, in various countries (collected by the Epidemiological Society of London), there were, in the former period, nearly twenty times as many deaths by smallpox as there were in the latter. And besides, 'one obviously beneficial result of vaccination, as regards its protective influence on the multitude, has not, we think, been appreciated or illustrated with sufficient force, namely, that the epidemic influence of smallpox greatly increased during the practice of inoculation, and greatly decreased since vaccination has been adopted.' Dr. Hebra, Professor of diseases of the skin at Vienna, incidentally remarks and simply alludes to the fact that 'epidemics of smallpox have been more rare and are less malignant since the introduction of vaccination.' But definite material for the following statements are to be found in the report of the Epidemiological Society in illustration of our remarks. 1. During 91 years previous to *inoculation* there were 65 distinct and well-marked epidemics, which is a ratio of 71.4 epidemics in 100 years. 2. During 63 years in which *inoculation* was practiced, and that to a great extent, there were 53 distinct and well-marked epidemics, which is a ratio of 84 epidemics in 100 years. 3. During the last 50 years, in which vaccination has been practiced, and inoculation been declared illegal, there have been 12 epidemics of smallpox, which is a ratio of 24 epidemics in 100 years.'*

"According to the well-kept mortality statistics of Sweden, the *annual* smallpox death-rate in that country during the period of 1841–50 averaged less than the *weekly* death-rate from smallpox and measles during the period of 1755–75. This important fact introduces us to an indirect benefit of vaccination, which has, until recently, been overlooked, namely, the beneficial influence of vaccination against other diseases. Drs. Greenhow and Farr, under the auspices of the General Board of Health of London, have shown that with the decline of smallpox consequent on vaccination, the general death-rate has greatly diminished from all causes; and that, too, notwithstanding a severe and fatal epidemic of influenza and two epidemics of cholera; and under this diminution, it is especially notable that the two classes of disease usually considered the most fatal, namely, scrofulous and low febrile affections, have diminished in a remarkable degree. The general death-rate per 10,000 of living population, during the periods of 1846–55, was twenty-five per cent. less than the decennial period of 1746–55, and forty per cent. less than the decennial period of 1681–90, showing a successive decline since the remoter period from 421 to 355; and since the more recent period from 355 to 249.

"According to Dr. Farr's statistics, the average annual death-rates in London, from all causes and all ages, per 10,000 living, were :—

From 1771–1780	500
" 1801–1810	292
" 1831–1835, (smallpox prevailed)	320
" 1840–1854	248 9.10

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*Medico-Chir. Review, October, 1857.

"The average annual death-rates in Sweden, from all causes and all ages, per 10,000 living, were :—

From 1776–1795	268
" 1821–1840	233
" 1841–1850	205

"In McCulloch's *Descriptive and Statistical Account of the British Empire*, Dr, Farr has shown that fever has progressively subsided since 1771 (at first under the influence of inoculation); 'and that the *combined mortality of smallpox, measles, and scarlatina, is now only half as great as the mortality formerly occasioned by smallpox alone.*'

"According to the researches of Dr. Greenhow, previous to the introduction of vaccination, the death-rate from scrofulous diseases was five times greater than it is at the present time ; and the present death-rate of pulmonary consumption, great as it is, is seven per cent. lower than it was previous to the discovery of Jenner.

"M. Bousquet,* in his detail of the epidemic which prevailed at Marseilles in 1825, states that the whole population was estimated at 40,000. Of these, 30,000 had been vaccinated, 2,000 had had smallpox, 8,000 had neither been vaccinated nor had smallpox. Of the 30,000 vaccinated, 2,000 were seized with smallpox ; 20 of whom, or one for every hundred affected, died. Of the 2,000 who had before had smallpox, either naturally or by inoculation, 20 were attacked, and of these 4 died, or one for every five who took the disease. Of the 8,000 who had not been vaccinated nor had smallpox, 4,000 contracted it, and 1,000 died, or one in every four. By this it appears that *one-half* of the non-vaccinated, *one-fifteenth* of the vaccinated, and *one-hundredth* of the variolated took the disease. But such was the difference in the comparative mortality of the attack in the vaccinated, and the variolated, that while the variolated part of the population were cut off in the proportion of *one* out of every 500, the vaccinated only lost *one* out of every 1,500 ; or, in other words, of an equal number of variolated and vaccinated cases, *three* of the variolated died from the second attack, for every *one* that died who had been previously vaccinated.

REVACCINATION.

"Several governments, confident in the anti-variolous power of vaccination, and profiting by the experience gained, determined upon revaccination as the most likely means of getting rid of the epidemics which were desolating their armies. The effect was so salutary as to have finally banished smallpox from among them. But this was not the only benefit. Knowing, as we do, that smallpox and cowpox are in reality the same disease, the latter being merely deprived of its virulence by having previously passed through the system of the cow, the results of these numerous revaccinations are of immense importance not only in confirming the identity of smallpox and cowpox, but in establishing the no less important fact that the protective power of smallpox itself wears out of the system in a certain proportion of cases, as life advances, in nearly the same ratio as that of cowpox. Thus, in all these armies a certain proportion of the men were found to have been previously vaccinated, while no inconsiderable proportion had passed through unmodified smallpox. Now, if we take the susceptibility to revaccination as a test of liability to varioloid or to a second attack of smallpox we have these vaccinations proving the fact that after a certain number of years the same proportion of those who have previously had smallpox become susceptible to a second attack, as those who have been vaccinated are to varioloid. So that once having passed through all the dangers of unmodified smallpox, the person, at the end of twenty years, for instance, has no better security against a second attack than the person who has been vaccinated for a corresponding length of time.

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*Traite de la Vaccine.

"In the Wurtemberg army, of 40,000 cases collected by Dr. Heim, on revaccination, it was found that in every hundred vaccinated after smallpox, 32 succeeded, 26 were modified, and 42 failed. In every 100 revaccinated, 34 succeeded, 25 were modified, and 41 failed.

"According to the Statistical Report of the Medical Department of the English army, from Oct. 1858 to Dec. 1859, 32,510 soldiers and recruits were vaccinated. Of this number, 4,124 bore marks of unmodified smallpox, 23,924 bore good marks of vaccination, 1,901 bore doubtful marks of vaccination, and 2,561 had no marks of either vaccination or smallpox.

"By reducing these figures as nearly as possible to the same scale as those above given for the army of Wurtemberg, we find that of the 4,124 who had previously had smallpox, on vaccination, 1,473, or 35 per cent., succeeded; 799, or 19 per cent., took imperfectly; and 1,842, or 44 per cent., failed. Of the 23,924 who had good marks of vaccination, on revaccination, 8,976, or 37 per cent., took perfectly; 5,277, or 22 per cent., imperfectly; and 9,671, or 40 per cent., failed. Of the 1,901 with doubtful marks of vaccination, the number of good vesicles on revaccination was 777, or 40 per cent.; modified, 505, or 26 per cent., and 616, or 32 per cent., failed. Of the 2,561 who had no evidence of protection, on vaccination, 1,362, or 53 per cent., took; 484, or 18 per cent., had modified vesicles; and 715, or 23 per cent., failed.

"In the Prussian army, in 1860, 69,096 soldiers were vaccinated. Of this number 57,325 exhibited marks, more or less perfect, of previous vaccination; 7,420 being distinct; 4,151 showed no marks whatever. Of the whole number, 44,193 took; 8,256 partially and 16,047 failed. These last were vaccinated again, when 5,577 proved successful, and 11,650 failed. During the year, there occurred among those who had been unsuccessfully vaccinated, and others who had been successfully vaccinated, in former years, one case of varioloid, but no case of smallpox. Thus, during the year 1860, out of 69,096 vaccinations, 49,777, or 72 per cent., took. In the entire army, there occurred during the year, 23 cases of varioloid, and 4 of smallpox. Of these cases, 14 of varioloid and 4 of smallpox occurred in persons who had not been revaccinated ; 8 of varioloid and 1 of smallpox occurred among those in whom the revaccination failed ; and the remaining 1 of varioloid, among those who had been revaccinated with success.

"In the United States revaccination has received but little attention. On the breaking out of smallpox among a crew of five hundred persons, on board a U. S. frigate, about twenty-five years ago, the late Dr. Samuel Jackson, Surgeon U. S. N., vaccinated the whole ship's company. One in six took. They had all been vaccinated or had had smallpox before. Those on whom vaccination failed, proved to be equally insusceptible to smallpox, which wholly ceased from the time the revaccinations took effect.

"Of 686 recruits vaccinated by Dr. Forry, U. S. army,* 560 had been vaccinated before, 74 had had smallpax, and 52 had not had smallpox nor been vaccinated. Of the 560 previously vaccinated, 381 exhibited good cicatrices ; 134 imperfect, and 45 had no marks at all; 196 took, including 55 which were modified. Of these 196, 109 had been previously vaccinated before the age of five years; 48 between the ages of five and ten, and 39 subsequently to the latter age. Of the whole 560 previously vaccinated, 316 were vaccinated before the age of five years ; 133 between the ages of five and ten, and 111 after the latter period. Hence it follows, though not as an exact result, according to Dr. Forry's limited experience, that as the ages of the great majority of these men ranged from twenty to thirty-three (the average being twenty-five), and as the ratio of successful revaccination is very nearly the same after each interval of age (being about one-third), the limit of the protective power of vaccination is not restricted to any precise number of years.

"The only statistics of revaccination of the present army of the United States, we have been able to obtain, are the following, furnished by Dr. S. O. Vanderpoel, Surgeon General of New York, to the U. S. Sanitary Commission,† from the first returns made to him in accordance with a general order :—

Total number of recruits examined	9,548
Bearing marks of previous vaccination	7,765
Total vaccinated or revaccinated	8,095
Found to be susceptible	2,292
Number susceptible who had marks of previous vaccination	1,338

"It is evident, from the foregoing statistics, that no certain period of limitation can be fixed for the protective power of vaccination. It is certain, however, that its loss of power bears *some* proportion to the lapse of time, though it seems highly probable that this apparent loss of protective power is in the same ratio as the varying liability to smallpox, independent of vaccination. Dr. J. F. Marson, the experienced superintendent of the smallpox and vaccination hospital in London, states that 'but few patients under ten years of age have been received with smallpox after vaccination. After ten years, the number begins to increase considerably, and the largest number admitted are for the decennial period from the age of fifteen to twenty-five, and although progressively diminishing, they continue rather large up to thirty, and from thirty to thirty-five they are nearly the same as from ten to fifteen ; but as in the unprotected at this period of life, the mortality is doubled, showing the cause to be probably as much or more depending on age and its concomitants, as on other circumstances. In still further advanced life, the ratio of mortality will be seen to increase also, as in the unprotected state.'*

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*American Journal of the Medical Sciences, April, 1842.

†Sanitary Commission Report, E.

"According to the statistics of Professors Heim, of Stuttgart, and Retzius, of Stockholm, and Dr. Marson, of London, the liability of smallpox is found to be, as regards age, very nearly the same as the increased susceptibility to a second vaccination, or, as will presently be seen, to a second attack of smallpox.

"The occasional recurrence of unmodified smallpox a second time, or after a previous vaccination, does not invalidate the general law, that a person who has once been properly vaccinated, or has once had smallpox, in general remains protected against a subsequent attack. It is, however, a well established fact, that certain individuals who have had unmodified smallpox in infancy or youth, may, especially if frequently exposed to the epidemic influence of the disease, have it again in after life ; and such attacks are always much more dangerous to life than smallpox after vaccination. All medical men of much experience have met with such cases. Dr. Thompson, of Edinburgh, in his own practice, met with 85 cases of second attack of unmodified smallpox, and Prof. Heim, 57. It is in vain, therefore, to expect that vaccination will give greater security to the person from a subsequent attack of smallpox than smallpox itself unmodified. All that can be reasonably asked is, that vaccination shall give as good security against a subsequent attack of smallpox as if the person had passed through smallpox itself; and this, if properly performed, and with good lymph, the accumulated evidence of the last sixty years most thoroughly proves. And with this immense superiority in favor of the protective power of vaccination over unmodified smallpox, namely : that it is not contagious ; does not endanger life ; does not engender scrofulous disease ; does not disfigure the countenance, nor cause deafness and blindness ; and does not cut off one in every four to eight affected by it—with all of which smallpox is justly chargeable.

"By estimating the result of the foregoing statistics (chiefly obtained from the returns of the Epidemiological Society of London, and more might be furnished), embracing carefully recorded and reconcilable points of observation for nearly 200,000 cases, we are justified in accepting this experience as a safe criterion by which to base an estimate for any number of cases, great or small.

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*Returns of Epedemiological Society, London.

"The conclusions elucidated from the data given are:—

"1. That vaccination is immensely protective against epidemic diseases generally, and against smallpox in particular; and against death by smallpox the protective power of vaccination is almost perfect.

"2. That of any number of persons who have had unmodified smallpox, the proportion wholly protected from a second attack at adult age is 43 per cent.; while 57 per cent. are liable to it again in some form or other.

"3. That out of any number of adult persons who have good marks of vaccination, 40½ per cent. are perfectly protected, while 59½ per cent. are susceptible to varioloid or to revaccination to such a degree as to render their protection perfectly complete.

"4. That the degree of protection afforded by previous unmodified smallpox, from a second attack, is only 2½ per cent. greater than the protection afforded by vaccination; a proportion too small to be regarded as any evidence of real difference in protective power, and reasonably attributable to spurious or impaired vaccination from a variety of causes, such as vaccination during the progress of other diseases, injury of the vesicle, or defective lymph.

"5. That out of any number of adult persons with imperfect marks of vaccination, 23 per cent. only are protected, while 77 per cent. are liable to smallpox or varioloid.

"6. The liability to varioloid after ten years of age, of persons vaccinated under three years of age, and the increased liability again from fifteen to twenty-five years of age, of persons vaccinated or revaccinated at from ten to fifteen years of age, demonstrates that, generally, protection by vaccination under twenty-five years of age, is complete for about seven years only. Subsequent to twenty-five years of age, protection is complete for a greater length of time, proportionate to the age of the individual at the time of the vaccination.

"7. That during the prevalence of an epidemic of smallpox there is increased susceptibility to the disease, and the degree of protection from previous vaccination is proportionately lessened. Under such circumstances, therefore, it is incumbent to revaccinate at intervals not exceeding five years; and in cases of certain exposure as soon as practicable thereafter, as there is abundant evidence of the protective power of vaccination and revaccination even as late as the fourth day after exposure to smallpox.

"8. Protection is known to be complete only when fresh vaccine lymph from a perfect visicle fails to take on revaccination.

A. N. BELL, Brooklyn, N. Y.
J. P. LOINES, New York.
H. D. BULKLEY, New York.
A. NEBINGER, Philadelphia.
JAS. F. HIBBARD, Richmond, Ind."

The foregoing paper the Board of Directors of the Eastern Dispensary, of New York, kindly consented to have set up for publication in the Annual Report of that Institution for the present year, and furnished your Committee gratuitously, with two hundred copies of the advance sheets, in pamphlet form, to work with.

The purpose of the third resolution was undertaken in all the States accessible to the Committee, but with few exceptions the whole duty of using the necessary degree of influence with the medical and secular press to give the substance of the paper a wide circulation devolved upon the Central Committee. These exceptions are, so far as heard from, individually or by their works, Drs. J. B. JONES, of Brooklyn, N. Y., J. F. MINER, of Buffalo, N. Y., J. M. TONER, of Washington, D. C., E. B. STEVENS, of Cincinnati, Ohio, C. A. LOGAN, Leavenworth, Kansas; Dr. WILLEY, of St. Paul, Minnesota, S. G. ARMOR, of Detroit, Michigan, DAVID PRINCE, of Jacksonville, Illinois, and D. L. McGUGIN, of Keokuk, Iowa, who have taken special pains to bring the object of the Association prominently before their respective communities.

In Brooklyn our paper was published in the daily papers by order of the Common Council, and in this way obtained a large circulation, not only in this particular community but, by the liberal extracts made by other newspapers, elsewhere.

Copies of our pamphlet were mailed to all the medical periodicals in the country known to the Committee. Many newspapers, also, of large circulation in various parts of the country, have by republication of the paper entire, or by the publication of well-chosen extracts, exercised a most salutary influence, and in this way rendered important assistance.

By these various means your Committee has good reason to believe that faith in the efficacy of vaccination and revaccination is much enlivened and largely on the increase. That, in this country at least, at no former period has the desire for, and the practice of, vaccination and revaccination been so general as during the last winter. Indeed, in many large communities, it has amounted to a *furore.* And proffered gratuitous vaccination in our large cities is, as it should be, fast becoming the rule instead of the exception, as heretofore.

There is, however, much yet to be done, much prejudice still to be overcome, in some sections of the country before the people generally can be considered as fully prepared for compulsory vaccination.

Many legislators, measuring the intelligence of the multitude by their own appreciation of the value and necessity of universal vaccination and revaccination, are anxious to move in the matter, and ready at any time to present it to legislative assemblies. But there is in this, your Committee is constrained to believe, danger of too hasty action. The experience of the past in regard to compulsory vaccination in this country, admonishes us to be cautious lest we raise a spirit of opposition "on principle," against anything savoring of restraint in a matter regarded as purely personal. People must be first educated into the belief that the right of doing as they please does not include among its privileges the right to have smallpox, and thereby to trespass upon their neighbors. Parents and boards of education must be conscientiously convicted of the criminality of inoculating a school with smallpox, because, forsooth, people have a right to do as they please in regard to their own health.

Poisoning is everywhere regarded as a crime. And the fatality of poisons generally is scarcely greater than that of smallpox. Why then, it may be justly asked, should there be free license to administer a poison so potent and so loathsome as smallpox?

When the protective power of vaccination against smallpox, and to a certain extent, against other diseases, and its freedom from danger are made to form a part of the education of every child in the land, no one will then claim the privilege of having smallpox. And it is to nothing short of this degree of enlightenment of the mind that your Committee aspires.

We have already initiated measures for disseminating the paper herewith submitted in the public schools of our large cities, and we hope ere long to reach every trustee and teacher, every parent and pupil in the land.

Respectfully submitted,

A. N. BELL, Brooklyn, N. Y.
J. P. LOINES, New York.
H. D. BULKLEY, New York.
A. NEBINGER, Philadelphia.
JAS. F. HIBBERD, Richmond, Ind.

THE

Galveston Medical Journal.

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Case of Doubtful Diagnosis Resulting in Death.

U. S. STEAMER TALAPOOSA,
OFF GALVESTON, TEXAS, June 16, 1866.

Editor Galveston Medical Journal:

The following case of disease and death, occurred on board May 11th, 1866. Thinking it might possess some little interest to the numerous readers of your Journal in this vicinity, I give below the symptoms and treatment, thereby hoping to elicit some information relative to the nature of the disease.

H. P., fireman, aged 26, native of England, of good constitution, bilious temperament, was attacked on May 9th, with severe griping pain in the epigastric region. There was no vomiting or purging. Bowels regular. Pain severe, attended with cramps.

Prescribed Tinc. Opii gtt. xl, Tinc. Zingiberis zss, Spts. Aether. Comp. zj—M; which was ejected. Followed by Opii. pulv. gr. ij, in pill, which was retained but a short time. I then gave Morph. Sulph. gr. ¼, with no better success, the stomach refusing to tolerate anodynes of any kind.

Thinking the attack might be produced by some irritating substance in the bowels, I gave hydrarg. chlo. mit. gr. viij, following it with Ol. Tigli. gtt ij, without effect. On the following morning (May 10th) gave pill Cath. Comp. iv with no better result. 11 A. M., of same day, he began to have darting pains through the bowels, extending up the right side to the chest and head.

12, M.—pain in chest and head severe. Gave an injection of Ol. Ricini ℥vj, mixed with a little warm water, and mucilage, which was retained but a few minutes. This was followed, at short intervals, with Mag. Sulph. et Sennæ Ext. Fluid and Ol. Terebinth., also Ol. Tigli gtt. iv, with mucilage—no evacuation. An emetic of Ipecac drs. ij, Ant. et Potass, Tart. gr. ij—no emisis. In the mean time the skin was covered with a profuse perspiration—pain unabated.

4 o'clock, P. M,—Prescribed four pills composed of Aloes gr. ij, Rhei gr. j each, followed in four hours by four more, and some three hours subsequently by two, making in all ten pills, containing in the aggregate Aloes ℨj, Rhei gr. x,—without effect. From 4, to 11, P. M., gave injections, every half hour, of soap and molasses, with the same result.

Pain in bowels less severe. Continued the injections. Applied mustard and hot turpentine stupes to abdomen. The former producing no impression whatever.

May 11th, 11, A. M.—Signs of depression and collapse, pulse feeble, tongue coated, dark, surface of body cold and covered with a profuse perspiration. Commenced to give stimulants, whisky, milk punch, etc.—not retained. Also rubbed the limbs with mustard water, whisky and Capsici.

11½, A. M.—Consulted with Surgeon Browne, U. S. A. We decided to give Hydrarg. Chlo. Mit. gr. xx, to be followed with Ol. Ricini. ; also a sol. Chloroform and Camphor, sat. dr. j, every half hour. The Calomel was retained about half an hour. The Chloroform and Camphor was ejected as soon as given. Tried Spir. Ammo. Aromat., with no better result. Some two hours after the first dose of Calomel was given, I gave xvj gr. more, followed by Ol Tigli gtt iv, with no effect.

During the day the emisis was of a dark coffee color, and towards the last, it had considerable fecal odor.

4, P M.—Began to be delirious, sinking rapidly, and died at 6, P. M., after forty hours illness.

SURGEON L. TRAVER,
U. S. Navy.

We make the following remarks to show the great importance of post mortems, and that they should not be neglected. The above was accompanied by a private letter from Surgeon Traver, with a request that I would give my opinion on the cause and nature of the case. I cannot, in reading the above, come to but one conclusion as to the cause of death, to-wit: *Peritoneal Inflammation.* This may have been produced by Diaphragmatic Hernia, as was the case of Senator Barrow of Louisiana, who died in Washington with like symptoms, and the post mortem revealed the cause. Or it may have been produced by invagination of some portion of the intestine producing complete stricture of the canal, and consequently Peritonitis. Or it may have been caused by ulceration of some of the agminated or solitary glands, (Pyer or Brumner) several cases of which I have seen. Where the cause is from ulceration there is rarely a complete stoppage of the anal ejections. In summing up the whole, I incline to the belief that it was a case of diaphragmatic hernia. I regret there was not a post mortem, as it would then have been an exceedingly interesting case as a point of diagnosis, and without it all is conjecture at least, and cannot be set down as a medical fact.

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NEW YORK, May 5th, 1866.

GREENSVILLE DOWELL, M. D.—*Dear Sir:* The prospect of the near approach of epidemic cholera, and the recent report of two sporadic cases in the city, together with some remarks made in the Board of Health disparaging homœopathy, have had the effect to renew the discussion as to the relative merits of systems of practice. The homœopathists reiterate their oft-repeated claims to preference by a pretended comparison of results, even going so far as to say, that their losses in cholera have not been over six, while other losses have averaged over fifty, per cent.; and that in 200 cases of yellow fever in New Orleans, every case was cuerd ! In the midst of all, the fact is patent to men of observation, that little has been gained in the treatment of either disease since their earliest prevalence as epidemics. It is easy to account for discrepancies in statistics of treatment without accusations of violations of truth, because of the fact that in both these diseases there is always a large proportion of a mild grade which may or may not be embraced in the record. With those who understand the subject, nothing is gained or lost by extraordinary statements of success, for it is a truth of universal acknowledgment that the more violent grades of these diseases are not cured, with few and rare exceptions, by any plan of treatment yet discovered and put in practice. Hence their great mortality wherever they prevail as epidemics.

Like other humbugs with which mankind love to be gulled, homœopathy has its triumphs. It struck the fancy of prominent men in Paris who had indulged a dread of heroic medication, and thus facilitated the expectant practice. Physicians, ambitious of both fame and profit, were induced to submit to the fashion of the times and trust equally with the homœopath to the *vis medicatrix naturæ*. One used an infinitisimal placebo and regimen, the other depended mostly on regimen alone, until it became a prevailing fashion in France, to be exported, like other French fashions, to America.

Call it by what name you may, the practice thus engendered virtually ignores the value and dignity of the profession, and succumbs to sciolism in high places. The great object of our profession is to cure diseases by treatment, and not to leave them, as was done before the profession had existence, to the operations of nature, and merely because it is known that nature will sometimes cure cases so entrusted to her. It were an easy matter to make a long list of diseases, which the vigor of good constitutions will in many cases overcome without the aid of medication, or with the ridiculous infinitisimals of homœopathy; but if this abstinence from treatment is to become a rule of practice, why should the profession be sustained? A system of hygiene, of dietetics, of regimen, which may be learned in a day, is all-sufficient, and physic may be "thrown to the dogs." I trust that Southern schools and hospitals will not undertake to prepare young men for Southern practice by such teachings and examples as these.

I am truly yours,

A. P. MERRILL, M. D.,
141 McDougal st.

TREATMENT OF CHOLERA.

Cholera is almost invariably preceded by a painless Diarrhœa, and this is in all cases to be promptly treated.

When Diarrhœa is present, go to bed and maintain a position on the back; use abundance of blankets, and send for a physician.

A physician can always be obtained by applying to the nearest Police Station.

Stay in bed until you are well; do not consider yourself well until you have had a natural movement from the bowels. Abstain from all drinks. Apply mustard plasters to the bowels.

In the absence of a physician, an adult can take ten drops of Laudanum, and ten drops of Spirits of Camphor. A child of ten years may take five drops of Laudanum and five of Camphor. A child of five years may take three drops of Laudanum and three of Spirits of Camphor; and these doses may be repeated every twenty minutes, so long as Diarrhœa, or Pain, or Vomiting continues.

This will save time, but in all cases send for a physician.

Do not get up to pass the evacuations, but use the bed pan or other conveniences. Never chill the surface of the body, by getting out of bed.

Remove immediately all the evacuations from your rooms. Scald all the utensils used, or disinfect them with Chloride of Lime; scald also your soiled clothing.

By order of the THE METROPOLITAN BOARD OF HEALTH.
EMMONS CLARK, *Secretary.*

Disinfectants and How to Use Them.

[ADVISED BY THE METROPOLITAN BOARD OF HEALTH.]

1. *Quicklime*—To absorb moisture and putrid fluids—use fresh stone lime finely broken; sprinkle it on the place to be dried, and in damp rooms place a large number of plates filled with the lime powder. Whitewash with pure lime, and not with kalsomine.

2. *Charcoal-Powder*—To absorb putrid gasses—the coal must be dry and fresh, and should be combined with lime: this compound is the "*calx powder.*"

3. *Chloride of Lime*—To give off chlorine, to absorb putrid effluvia, and to stop putrefaction: use it as lime is used, and if in cellars or close rooms the chlorine gas is wanted, pour strong vinegar or diluted sulphuric acid upon your plates of Chloride of Lime occasionally, and add more of the Chloride.

4. *Sulphate of Iron* (*Copperas*)—To disinfect the discharges from Cholera patients and to purify privies and drains: Dissolve 10 pounds of the Copperas in a common pailful of water, and pour a quart or two of this strong solution into the privy, water closet or drain, every hour—if cholera discharges have been thrown in those places; but for ordinary use, to keep privies and water closets from becoming offensive, pour a pint of this solution into every water-closet pan or privy seat every night and morning. Always sprinkle a cupful of chloride of lime or lime-powder in the same place and at the same time. Bed-pans and chamber vessels are best disinfected in this way, by a spoonful of chloride of lime and a spoonful of the copperas solution.

5. *Permanganate of Potassa*—To be used in disinfecting clothing and towels from cholera and fever patients, during the night, or when such articles cannot be instantly boiled.

Throw the soiled articles immediately into a small tub of water in which there has been dissolved *an ounce* of the Permanganate salt to every 3 or 4 gallons of water. A pint of "Labarraque's solution of Chlorinated Soda" may be used for the same purpose in the tub of water. Either of these solutions may be used in cleansing the soiled parts of the body of sick or dead persons: may also be used in bed-pans, &c.—*Richmond Medical Journal, May,* 1866.

Places that Must be Disinfected.

DIRECTIONS.

(*a.*) *Water-closets*—Use 4 and 3.

Privies—Use 4, 3 and 2.

Bed-pans and Close-Stools—Use 3, and 4 or 5.

Cellars—Use 1, 2 and 3.

Vaults and Stables—Use 1 and 2, or 3 and 4; or any of coal-tar powders.

(*b.*) *Soiled Clothing, Bedding and Carpets*—Boil whatever can be boiled, if the articles have been soiled by cholera discharges. Use solution of chloride of lime or chlorinated soda, a quart of either solution to 10 gallons of water, if the articles are coarse and their colors of no consequence; but upon fine clothing that has been soiled in cholera or fevers, use the disinfectants described under No. 5 in the list above.

(*c.*) *Sick Rooms*—Use 1, 2 or 3.
Bed Rooms—Ventilate.
Closets—Cleanse and dry.
Beds and Bedding—Ventilate frequently in the sun.

(*d.*) FINALLY.—*Let fresh air and sunlight purify every place and thing they can reach.* Open and dry your cellars and vaults. Flush the water-closets and drains *daily* before throwing in the disinfectants as directed. Let there be no neglect of domestic and personal cleanliness.

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CHLOROFORM

AS AN INTERNAL REMEDY.

BY A. P. MERRILL, M. D., NEW YORK CITY.

At the last Commencement of the Bellevue Hospital Medical College, the chosen orator of the occasion, who announced himself, as neither an allopath nor a homœopath, neither heroic nor expectant, but only a lawyer, made the startling suggestion, that the three learned Professions are daily lessening their importance, by the liberal and enlightened course of their instructions. As the celebrated teacher, Fenelon, by his skillful instruction of the Dauphin, made his services unnecessary to the King, so do the most skillful theological, legal and medical teachers of the present day, in some degree, supersede the necessity of their future labors, by enlightening mankind in regard to all the practical principles of their several branches of learning. But whatever may be true in regard to theology and law, it cannot be doubted, that medical men are slow to believe, that the value of their services is ever to be thus lessened, much less dispensed with. Yet there is abundant reason to believe, that the tendency of all liberal instruction in medicine is, to inform the masses of mankind in regard to what have been hidden secrets of Professional knowledge, and to so shape the practice of the healing art, as to bring it somewhat largely within the comprehension of the non-professional.

Under the influence of liberal-minded men, anatomy, physiology and chemistry have become common studies of the rising generation in our country, and children in our public schools are permitted to imbibe the facts and principles of natural science in the art of learning to read. Teachers of youth are no longer content with the fictions of nursery tales, and it is by no means uncommon to meet with both men and women, in all the walks of life, who are familiar at once with the nomenclature and leading principles of practical medicine. Nor is the apprehension, now entertained by well-informed physicians, just, that such knowledge will tend to the increase of charlatanry. On the contrary, it is virtually confessed, that the better the mysteries and complexities of structure and function in the human system are understood, the less likely will people be to rely upon intuitive skill and superstitious observances, in the treatment of disease. The common sense and common judgment of men, are of scarcely less value in Medicine than in Law and Divinity; and the exclusive and learned charlatanry of each of those learned Professions is to be equally condemned. The single step from the sublime to the ridulous is not shorter and easier, than that from the complex mysteries of polypharmacy, and the pedantic technicalities of the old school of Medicine, to the simple secrets of the nostrum venders of modern times.

There was a time, not long ago, when medical prescriptions claimed the confidence of men, by virtue of the multiplicity of their ingredients, and the mysterious characters in which they were written, while the uninitiated were kept in equal ignorance of the nature of the malady and the means of cure; but the introduction of more liberal views, not only simplfiying all combinations, but by lessening the distance between Physician and patient, induced the latter to expect that his condition will be made known to him, as well as the means provided for relief. The popular knowledge of the most valuable remedies in use is due to the introduction of this more liberal system of medical practice; and all observation proves, that men are more likely to require the advice of skillful Physicians than before. As every Doctor, notwithstanding his own knowledge of Medicine, appeals, when attacked by disease, to his neighboring Doctor for advice, so the well-informed non-professional man calls the best skill to his aid, whenever he needs opium, bark or mercury, although he can be taught nothing new as to the remedial qualities of these medicines.

Now what has become true, under these liberal teachings of the Profession, of bark, opium and mercury, I would have true also of chloroform, as an internal remedy. But in regard to this, we have to contend with preconceived and erroneous notions of its poisonous qualities. These notions, wholly unfounded, have been fostered and encouraged by all classes of people, and have been sanctioned by legislative action, even to the extent of forbidding the sale of any quantity of chloroform, except upon the prescription of a Physician; and when so sold, it must be labelled *poison*, although it is the least poisonous of all the active remedies in use. But we may hope that in this enlightmisprint

ened era, the public mind may be disabused of such prejudice, in somewhat less time than it was of a similar prejudice in regard to Peruvian bark.

Physicians will readily understand something of the value of chloroform, when they come to be aware of its power in the chill and fever, and all kindred affections. A remedy which will relieve chill, with its concomitant congestions, more or less severe, and that so effectually as to prevent febrile reaction, may be held to possess a power over certain forms of disease, which has been accorded to no other, and to promise results, which the most sanguine have never expected to accomplish by medical treatment. The discovery of cinchona and its alkaloids and salts, opened a new era in the practice of the healing art, which is familiar to the human mind throughout the world. The non-professional everywhere have learned the uses of these remedies in the prevention of chill. Everybody is supposed to know, that ifthe life of the patient can be preserved through the chill of fever, and a general reaction established as its natural sequence, there is reason to hope for such a remission of the disease, as will justify a reliance upon quinia to prevent its return. This is a great boon to mankind, which could not long remain in obscurity, and the human race has profited by it. But we have a remedy in chloroform more simple, safe and easy of administration, which striking at the root of the matter, is capable, by a single harmless dose, which any one may administer, of curing the chill itself!

In certain localities, where periodic fever prevails in its gravest forms, and especially in subjects with whom the periodic movement has become habitual, it is probable that the disease may not always be eradicated by a single dose of chloroform, although the chill, and the congestions attending upon it, be decidedly relieved. In malaria districts, the intensity and persistency of this periodic movement, have often been such, as to withstand, for a long while, the most approved antiperiodic treatment, and it is reasonable to expect that, under such circumstances, preventive measures may become necessary, and even that a return of the chill may demand a repetition of the chloroform treatment. But in several cases in the adult subject, I have found the one hypnotic dose of chloroform sufficient to effect a cure; and I have good reason to believe, that in a large majority of cases of infantile convulsions, the single effective dose is all the child requires, although I have often followed it with quinine as a precautionary measure. But in none of these cases has the disease returned, except in one instance, on the thirty-fifth day, whether the quinine was given or not.

It is now nearly fourteen years since I first ventured to pour a teaspoonful of chloroform into the mouth of a child, dying of convulsion from chill. The feebleness of the child's constitution, and the long continuance of the convulsion, had caused such prostration, as to afford little hope of any relief; but the child slept, recovered its pulse and warmth, and awoke in apparent health. It had no return of the disease, and from that time to the present, I have not failed in any similar case, to accomplish the same result by the same simple means. Sometimes I have succeded with larger, and sometimes with smaller doses, and in a few cases of great severity, and with the vital powers much exhausted, I have given chloroform by enema, as well as by the mouth, and always continued it until sleep was produced. This being secured, spasmodic action has always ceased, and recuperation begun. Indeed, as soon as the eye-lids are closed, the child may be considered safe, and only needs to be permitted to sleep quietly, as long as it will

In a notice of my publication on this subject, a Medical journal remarks, that "the convulsions of children, are rarely fatal," and in a monograph, recently published in this city, it is stated in reference to infantile convulsions, "even in this dreaded disorder, the majority will recover, even if no interference be practiced;" but the mortuary reports of New York show a frightful amount of mortality from this disease, such as might convince the most inveterate *expectante*, who ever waited upon Nature to cure a fatal disease, that it is inexpedient to entrust any one case to its remedial agency. Certainly, many of the cases which I have cured with chloroform, in hypnotic doses, must have proved fatal without it; having resisted all the usual remedies, and in some instances, been abandoned as hopeless.

The following is a brief description of these much dreaded cases of infantile disease. The child is seized, often quite unexpectedly, with all the symptoms of a chill, as it occurs in the first stage of a febrile paroxysm, but in many instances, the chilly sensation is not great, or much complained of. In very young children it comes on unnoticed. It does not continue long—sometimes not more than fifteen minutes—before convulsive movements are observed about the mouth and face, extending quickly to the eyes and limbs, until the whole muscular system appears to be involved. The eyelids are stretched wide open, the eye-balls are blood-shot, and twitch with continual spasms, the pupils are dilated, the fingers and toes are drawn in and convulsed, and a quick succession of general convulsions, from which the arteries do not appear to be exempt, continue for one, two or three hours, during which the pulse becomes enfeebled, the vital powers exhausted, the throat and bronchial tubes filled with mucus, and the spasms cease, only to be followed by speedy dissolution.

In spite of the remedial powers of nature, so strong in the young subject, and in spite of all the artificial remedies heretofore in use, this is the course and the issue of a majority of the cases of infantile convulsions, proceeding from the effects of congestive chill; but my experiments with chloroform, prove, beyond all question, that a hypnotic dose of this remedy, given in any part of the course of this alarming and dangerous disease, is certain to afford prompt and permanent relief. The quantity required, depends, as in other diseases and remedies, upon the age and constitution of the patient, and the intensity and duration of the disease; but to obtain its full curative effects, it is always necessary to administer such doses as will produce sleep. This alone, is evidence of its constitutional influence, and the rule holds good with new-born infants, and with older children alike.

The remedy is equally efficacious, also, in chills and congestions in the adult subject, in concussion, sunstroke, hæmorrhage, cholera-morbus, pneumonia, delirium tremens, and in all other diseases, dependent upon, or accompanied by severe congestion, as a prominent pathological condition. Indeed, it has, in no case, failed in my hands, to relieve congestion, whether proceeding from the febrile cause, local irritation or concussion. After having observed its wonderful power in cases of infantile convulsions, I have, from analogy alone, been led to use chloroform internally, in a variety of kindred affections, and with uniform success. From the same analogy, I infer its efficacy in Asiatic cholera, in the treatment of which, it has, so far as I am informed, not yet been tried in hypnotic doses. In various parts of Europe, chloroform has been used in cholera, both by inhalation, and in small doses by the stomach, as it has been, in some parts of this country, in congestive chill; but I have not been able to ascertain that, in any case, reliance has been placed upon its full physiological effects, as evidenced by sleep, which alone insures its curative power. It is not enough, that anæsthesia is produced by inhalation, or that partial influences over the nervous system, are obtained by small and repeated doses by the stomach If the grave derangements of the nervous system in congestive chill, convulsions and cholera, are to be overcome, it is only by placing the patient under the full physiological influence of chloroform, through the medium of the stomach and bowels, as evidenced, not by anæsthesia, but by sound and healthful sleep.

The largest quantity of chloroform I have given, was in a case of pulmonary hæmorrhage, in which, under urgent circumstances, half a fluid ounce was swallowed in the course of half an hour, with prompt relief to the patient, and without disagreeable or untoward effects. In some cases of infantile convulsion, relieved by full doses of chloroform, the sleep produced, although calm and healthful, was followed by temporary nervous restlessness, which subsided without remedies. In pneumonia and in delirium tremens, I have given chloroform, for several successive days, in doses of a fluid drachm and upward, with the invariable effect of producing sleep, and sometimes, when large doses of opium had failed, always affording relief to the irritations and congestions of the lungs and brain. In these and other cases, the wakefulness produced by opium, has always been relieved by chloroform, and I have sometimes suspected that there was a happy concurrence in the action of the two remedies. In no case have I observed injurious effects upon the mucous tissues, whether the chloroform was administered unmixed, or in combination with mucilage or syrup; and my own firm conviction is, that we have no other remedy which is powerful for good, that is less objectionable on account of evil results. I do not hesitate to recommend its use in the treatment of cholera, both by the stomach and by enema, depending, as I have done in other cases, upon the force of analogy; but I have little confidence in certain relief, unless the remedy be used in such quantity as may be required in each individual case, to produce sleep, or, in other words, its full physiological effects.

GONORRHŒA.

In my visit to all the hospitals, nor in all the late publications, have I seen or heard of any improvements in treating this disease. The use of the Endoscope has placed the pathology on a positive basis, showing it to be a plain inflammation of the mucous tissues involved, and may be cured by the local application of remedies for inflammation. But this inflammation is specific in one sense, and may be cured by specific remedies.

I have been for several years using a specific treatment different from any I have seen published, and I here give the different prescriptions to the profession, that they may give them a fair trial. I use, as a special specific, the following :

R. Olei Cupebis.
Chloroformi, aa ii dr.

S. Give ten drops three times a day. This may be increased to 20, if necessary, or you may use :

R. Olei Copaibæ, 1 oz.
Chloroformi, j dr.

S. Half teaspoonful or thirty drops three times a day.

The first is the best, will not disagree with the stomach—will not produce diarrhœa or any unfavorable results. I, in addition, give the following pills every other night, if it is an acute case :

R. Hydr. Chl. Mitis.
Pul. Rhei.
Ext. Taraxici, aa i dr.
M. F. Pill, No. 24.

S. Take three every other night, and if they do not act take more until they do.

Where patient has gleet, or it is chronic, I use the following injection three times a day:

R. Zinci Chloridi, ~~j~~ XXX grs
Aquæ Pluvialis, xx z.

S. Inject three times a day.

This simple plan will cure most cases in a few days, and you will not have stricture, orchitis or dyspepsia to follow. I have seen many a young man suffer terribly from taking Chapman's old prescription, and it scarcely ever succeeds, (at least it never *did* in my hands.) It is liable to produce chronic diarrhœa, and finally death. I have never had a patient to complain of the chloroform and cubebs prescription, and it can be taken without it being detected by others in the breath; and be easily carried. It should be taken regularly, not omitting a single time, and should be continued for at least a week after all appearance of the disease has ceased. This is all-important. Many of the worst cases of gleet I have ever seen were imperfectly cured gonorrhœas.

I rarely make any change in diet, but strictly forbid the excessive use of ardent spirits; but where patient has been in the habit of dissipating, I recommend the use of Holland Gin or Schnapps, but not to excess, for it is sure to increase the symptoms, especially if it is an acute case, or in a gleetic patient. Many cases of Blenorrhargia are kept up by slight strictures—then comes the use of the Endoscope, which will show the stricture and also the abraded mucous surface from which the gleet comes. Sometimes the prostate glands are involved and secret a muco-glairy substance that is often mistaken by patient for semen and causes much apprehension and distress of mind. This prostatic irritation often produces nocturnal emissions, leaving the patient languid and depressed, and as if he had not rested well. These symptoms may be relieved by persevering in the constitution al treatment above indicated.

REDUCTION OF AN INVERTED UTERUS OF SEVEN YEARS' STANDING.

BY THOMAS ADDIS EMMET, M. D.,

SURGEON TO THE STATE WOMAN'S HOSPITAL, NEW YORK.

[Read before the New York Obstetrical Society, November 21, 1865.]

Mrs. Q., aged 24, came under my charge Oct. 8, and presented the following history: She had menstruated for the first time at eleven years of age, with no return for a year, but after this period she became regular and continued in perfect health. She was married at 22 years of age; soon afterwards became pregnant and went to full term. Labor commenced between the hours of nine and ten P. M., March 11, 1865. She was attended by a homœophathic practitioner, who was called in attendance at once and remained all night. The progress of the labor, it seems, was perfectly natural. About eleven, A. M., the attendant ruptured the membranes, and delivery took place of a large male an hour afterwards, labor having continued nearly thirteen hours. As the head passed the vulvæ, it was discovered that the umbilical cord had made several turns round the child's neck; the cord, as stated, was immediately slipped over the head without traction, the body followed immediately, and soon afterwards the placenta. Within an hour after delivery the patent suddenly became faint with violent after-pains coming on. This condition continued for some forty-eight hours, with a bloody discharge, which, at the time of a pain, was expelled from the vagina with considerable force. After the pains had ceased, the discharge continued more than natural, and at times was almost pure blood. About a week after delivery the nurse discovered a mass presenting itself just within the vagina. An examination was made by the attendant, a consultation called, and the case pronounced, (as the patient states) one of cauliflower-growth. She returned home to her friends, in Utica, at the end of the month, still suffering from a constant sanguineous discharge. Her general health at length became so much impaired that Dr. McCall, of Utica, was consulted, and he recommended her to my care.

She presented every indication of suffering from extreme anæmia, with a pulse of 140, and a loud cardiac murmur following any exertion. On making a vaginal examination, a soft mass, somewhat larger than an egg, was felt lying in the axis of the vagina, and being pedunculated, might well have been mistaken for a polypus. I passed two fingers of the left hand well up into the cul-de-sac, behind the mass, so as to lift the uterus above the pubes, and, with the other hand over the abdomen, I was able to approximate the two sufficiently to satisfy myself that the case was one of inversion of the uterus.

Oct. 9th.—Dr. Thomas saw the case in consultation and verified my diagnosis. It was then decided that nothing could be gained by further delay.

10th.—With a pulse of 160 per minute, she was placed under the influence of ether, at 12.30, P. M., by my assistant, Dr. Perry. As it was a serious question if, in her reduced condition, the anæsthetic could be continued long enough to effect the reduction, I requested Drs. Thomas, Sabine, and George T. Elliott to aid me with their counsel. After a few moments she was fully under the anæsthetic; the pulse became fuller and reduced in frequency. The patient was placed on the back, with her knees drawn up and lying on a table, of a convenient height for me to operate while seated. The left hand was passed entirely within the vagina, and by pressure of the fingers the fundus was dimpled, while the organ was steadied by the right hand over the abdomen. At the end of an hour I found that but little progress had been made beyond the fact that the fundus was somewhat smaller, in consequence of the impaired circulation from pressure. As there was full time for reflection, it became evident to me that the mode of reduction recommended by pressure made at the fundus was incorrect. As the fundus was indented by pressure, the body spread laterally, and, although it did materially dilate the neck by flattening it, the power was lost, without influencing to any extent the point of constriction. In fact it seemed if any force was exerted, it was to increase the difficulty by rolling in the parts above at the point of inversion. With this view I allowed the fundus to drop into the palm of my hand, and passing the thumb and fingers around the mass as high up as possible within the cervix, I made steady upward pressure with a view of returning first the portion last involved. This manœuvre was aided by lifting the organ above the pubes, and endeavoring with the other hand to roll out the inverted portion by sliding the abdominal wall over the point with some pressure. In the course of half an hour, the progress of the reduction was marked. The globular mass, which was felt through the abdominal parietes in the beginning, now gradually became oval laterally, with a marked depression in the centre. By this time my hand had become almost powerless, and I was obliged to call on Dr. Elliott to relieve me for a few moments. I then continued the manipulation for some three-quarters of an hour longer, when Dr. Thomas, who had been absent during the past hour, returned. From his appreciation of the progress made, the only fear I entertained of final success was in the patient's power of endurance. Gradually the fundus passed entirely within the cervix, but beyond this point, for an hour longer but little advance was made in the reduction. The depression, however, felt through the abdominal walls, above the seat of inversion, had become large enough apparently to admit the extremities of three fingers, with a proportionate increase in the size of the mass. During the whole time the patient had been kept profoundly etherized by Dr. Perry. This was found necessary from the fact that in the beginning, when its influence was lessened to any degree, vomiting came on immediately, and with any movement of the patient it was impossible to steady the uterus or maintain the necessary amount of pressure. Her pulse had continued good throughout, and her general appearance was satisfactory. Shortly before four o'clock she began to fail; at about ten minutes after that hour her condition had become critical, and I was obliged to abandon my efforts for the time being, in consequence of the powerless condition of my hands. In consultation, the opinion was unanimous that it would jeopardize the life of the patient to continue the etherization longer. In this opinion Dr. Echeverria, who was present, concurred. At my request a last effort was made, for I was satisfied that I could not be deceived in the fact that the depression, felt through the abdomen, was slowly becoming larger. Drs. Sabine and Elliot, after a few moments, desisted from their efforts, as the latter gentleman had advised a frequent change, so that the hand of each operator having rested, the power exerted would be maintained in a more uniform manner. Dr. Thomas in turn also passed his hand into the vagina, and, as he describes it, he drew down the mass so as to reproduce the inversion, and on immediately returning it, he found that it did so beyond its previous position; he repeated this manœuvre, and on returning it again, on the point of his finger (without force on his part, as he stated,) the fundus passed on and the reduction was completed, after an effort of three hours and fifty-five minutes.

This point is one of great clinical interest, and worthy of discussion by the Society, as to the bearing of this manœuvre on the result, as well as the exact point at which it should be resorted to. My own impression is that Dr. Thomas is mistaken as to the extent of reduction made by him. The portion below the constriction was flaccid and could be readily drawn down, but above the engaging point, where the surfaces were forced into such close proximity, it is a question if more force would not have been required to reproduce the condition existing at the beginning, than it was possible to have exerted. The final effort, doubtless, hastened the issue, yet as the widest portion of the uterus was already so far advanced within the canal, it is possible that the muscular action of the organ itself might have at this stage soon completed the reduction, as, from the result, the canal was evidently already dilated sufficiently for the purpose. We see the principle demonstrated in an India-rubber ball which has been indented; as soon as the action of recovery has once commenced, the progress of restitution rapidly increases to the consummation.

She speedily recovered her consciousness after the ether, and during the vomiting following, as a precaution, I passed the index finger directly into the relaxed canal of the uterus, which was presenting immediately within the labiæ. It was fortunate that I did so, for on the instant I felt a portion of the posterior wall near the fundus indented. With the other hand on the abdomen, I seized the organ and restored the portion on the point of my finger, and retained it in the canal until the paroxysm had passed. It was the only effort at vomiting, and there was no return.

At 5 P. M., with a pulse of 130, twenty-five drops of Magendie's solution of morphia was administered with beef-tea by the mouth. At 9 P. M., pulse 128, as she was suffering from pain generally over the abdomen, thirty drops of Magendie's solution was repeated. She was sleeping quietly at 10:30 P. M.; pulse 112 per minute. At midnight the pulse was 108, and she had been sleeping since the last visit.

11th.—At 9 A. M. the pulse was 110; she was free from pain, and had passed a quiet night. As there was some tenderness on pressure over the abdomen, a large poultice was ordered. At noon her condition was comfortable; pulse 120, with some increase of tenderness over the abdomen; ordered the morphia to be repeated. Half past two P. M. was free from pain, and sleeping quietly; pulse 105. At 7 o'clock P. M. pulse the same; repeated the morphia.

12th.—9 A. M. pulse 100; she was entirely free from pain, and had passed a very comfortable night. From this time she was kept quiet in bed for twelve days without any further treatment being necessary.

16th.—I made a digital examination and found the os patulous, but the uterine canal contracted above the vaginal junction so as to admit the point of the index finger only for a short distance. The sound passed a little over three inches readily to the fundus, with the organ somewhat anteverted.

Nov. 28.—She visited me after taking a long drive. I found the uterus had returned nearly to its normal size. She had menstruated naturally a few days before, and was rapidly regaining her health and flesh.

After presenting the case to the Society, Dr. Budd remarked that Dr. Noeggerath had some years ago succeeded in reducing an inverted uterus by a similar process, and that the case was published in the Transactions of the Academy of Medicine.* Dr. Noeggerath being

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*This paper was read before the Academy of Medicine, March 5, 1862, and published in the Medical Times, New York, April 26, 1862. Since reporting the case, I have read the article for the first time, and with great interest. But the method employed by myself was entirely different. I grasped the circumference of the mass as near the seat of inversion as possible, and, by upward pressure, the extremities of my fingers acted as a wedge laterally to roll out first the portion last inverted. And, in addition, the manœuvre was facilitated in a great degree by the action of the other hand over the abdomen.

Dr. Noeggerath's case was of thirteen years' standing. He first resorted to the method proposed by Prof. White, of Buffalo, but without success, and states in his paper as follows: "Almost discouraged by these fruitless efforts, and feeling that the strength of my right arm was nearly exhausted, I was about to desist from any further attempts, when the idea struck me to proceed on a different plan of manipulation. I at once changed the position of my hand in such a manner that the fore called on, related the case in full, and remarked that in recent cases, and where the fundus had not yet escaped from the cervix, the dimpling process recommended would sometimes succeed, but not always where the inverson was complete. He also gave the particulars of a subsequent case where he succeeded only by confining his manipulations entirely to the return of one side alone, until the reduction was complete. It was the opinion of some of the other members that the condition of the patient, at the point in question, favored a rapid reduction in the last stage, and as the dilation was complete, the inate force of the organ itself might have soon completed the reduction.

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and middle fingers grasped the right section of the tumour; while the thumb was implanted on the left side at a point where the upper two-thirds of its length met the lower one. In this manner a pressure was exerted by the thumb on the lateral border of the body of the womb, which pressure took an upward as well as a lateral direction, and resulted in the formation of an oblong groove, the long diameter of which pointed below towards the left horn of the uterine fundus, and upwards to the spot where the inverted and the non-inverted portion met on the left side. The object of this first step of the operation was to completely double up the uterine cavity, so that the right—now inner—wall touched the left one. After this was completed, the dimpled portion was carried upwards by the thumb, and in doing so it could be observed that the right side of the upper section of the inverted cervix passed first of all through and beyond the os uteri. During the progress of this manipulation, the right lower section of the uterine body followed. and reassumed its normal position, while the opposite part of the fundus continued to remain outside the os, only much shortened and doubled up. As soon, however, as half of the tumour had disappeared inside the abdominal cavity, the intra-vaginal section slipped suddenly out of my fingers, and the operation was completed."

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AMERICAN MEDICAL BIOGRAPHY.

Dr. J. M. Toner, of Washington, D. C., is engaged in compiling and writing a Biographical Dictionary of all deceased American physicians of whom he can collect data of a sufficiently accurate character to enable him to give a brief sketch of their lives and labors.

Physicians and others who have deceased relatives or friends who studied and practiced medicine in any part of the United States, and will take the pains to furnish the Doctor with definite facts, comprising the full name of the individual, with his birth place, date of birth and death, his preliminary education, medical studies, place of graduating, location, success in any particular branch of practice, and whether filling any and what public stations during life, and if an author, the exact title of his publications, and where and by whom published, will, besides conferring a favor on Dr. Toner, serve the cause of medical literature of a very attractive and useful kind. It is expected the collection will reach about ten thousand names.

Dr. Toner is a Pennsylvanian who has practiced medicine for the last ten or fifteen years in Washington city. He has peculiar qualifications for the task he has undertaken, and we trust his brethren of the medical profession in his native State will aid him in the collection of materials for his work.

[The above is a printed extract handed us while in Washington. This is a noble work and we hope Physicians in this State will comply with Dr. Toner's request. To report these facts for the State of Texas is made our duty by the American Medical Association. (See minutes published in this number.) We hope all Medical Societies and Physicians will assist by reporting to us, and we will forward copy to Dr. Toner.—Ed.]

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MEDICAL FACTS AND OBSERVATIONS.

Made During our Medical Tour and Attendance at the Meeting of the A. M. Association in May.

The Charity Hospital—On our way we called at the Charity Hospital, but could not see any of the medical officers; and on our return it was the same case. We received from Dr. Clapp copies of reports, which we will classify and publish in future. We went over the building and found much to object to:

1st.—The building is an oblong block, with wards on both sides of a passage or corridor, windows being on only one side, and consequently badly ventilated. The bedsteads were wood, which should never be used in a hospital—were too close together, and when filled patients could not have enough healthy breathing air.

This is the worst constructed building I visited during my journey.

It is also surrounded with buildings and cannot get a sufficiency of pure air, if the wards were well constructed. No hospital should be built in the heart of a city, unless there be ample grounds. Every ward should have opposite windows and 1500 cubic feet of space for each bed; hence this site should be abandoned and sold out and another site chosen, and a well-ventilated building put up. The South requires more air than Northern climes. The pavilion or cross ought to be adopted, and so constructed that the sun should shine on all sides. These principles also apply to private dwellings, and should be regarded in every instance, especially in towns and cities. The Charity hospital is kept in a neat and cleanly manner, and has an able staff of medical officers; yet the ratio of mortality is very great, and always will be until it is better ventilated.

On the 22d of July we returned home, which will account for the delay in issuing the Journal. The gentleman whom we specially left in charge of it returned to the country before he completed the April number. But we will say, the full amount of printed matter will be given, and we will endeavor to be punctual in the future. We have secured an able corps of contributors, and made arrangements for engravings for each number. We have a complete list of exchanges, besides a great number of monographs, from which we will make extracts. We have received the code of several medical societies, which see in this number. We also publish the Constitution and By-Laws of the State Society, which is a chartered institution, and we hope will be patronized by our county societies. We feel delighted to see that our first number has awakened an interested in those subjects. But few physicians, who do not belong to some association, ever read and many never see a medical journal. Our experience is, those physicians who spend most money for journals and books have the most money to spend. Those who do not take a journal rarely make enough money to pay for one, and even then they get more than they deserve. We did not start our journal as a rival of any other, but to assist all, and hence we have published the price of each journal received in exchange. We again solicit contributions from our State physicians, and look to them for support. No one need fear the journal will fail or be indefinitely suspended while we can write and have money to publish.

Baltimore and the Convention.—From New Orleans I went directly to Baltimore. The acts and doings of the Convention are published in another place. The time of the Convention was much taken up with the subject of Cholera, as is seen by the reports; and the Association was about equally divided between the infectionists and the non-contagionists. Many facts were stated and much information elicited, very many things suggested that will be thoroughly tested in the present invasion of the disease. Very little was said about treatment, and nothing new was suggested. Those who signed the call for a meeting, after the Convention adjourned, to discuss further the question of quarantine, are much blamed by some of our brethren. Dr. Ramsey, the able editor of the Memphis Medical Journal, charged us (for we were one of them) with a breach of professional courtesy, by not abiding by the vote of the Association. This needs explanation. The vote was taken after the hour assigned for adjournment—many gentlemen wanted to speak, and the call was made in the Convention, and by the President, and it was not a separation but an irregular adjournment.

The subject of Medical Education was also earnestly discussed, and the matter was referred to a special committee, who should correspond with the different colleges for a lengthening of the lecture term, and for more consideration to professors: also, a classifying of studies during the two sessions. Upon this subject the President fully expresses our own views. He said a man should be qualified before he took his diploma, whether he attended one or two courses of lectures of four or six months time; and when one came thus qualified he should not be rejected. We think any change of the present system will only result unfavorably. If each Professor gives his full number of lectures he can give a very complete course in four months, and if he has six months and has the gout, or is drunk, or careless of his class, he will not complete a course in ten months.

It would be preferable to have classes for lectures, but then the school will have to be divided, and a young man would have to stay double his present time, and for that but few have money enough. My own experience in Medical Schools is that many leave before the sessions are out, because they have not money to pay their board, and I am sure to lengthen the session would only make many more half Doctors, or Doctors practicing without diplomas. What we would suggest for the improvement of medical education, would be close study under a good physician. Let the preceptor take his pupil to all his bad cases, have him nurse them, give his medicines, and report the changes; taking his books with him. It is a good place for study, as there should be no noise in the room. He only wants a dictionary and the book he is reading, and they are easily carried. This makes up for clinical instruction. Then send him to a school organized on the following plan: No Professor to be appointed until he has stood a close examination, both in writing and speaking. Take no stammering tongues. Take none who do not feel enough interest in his pupils to exert himself to instruct his class. Do not have one setting down talking to his class, throwing his spectacles around his fingers, as I have seen, but let him be interested and he will interest.

Let these concours take place every ten years. If the Professor has become old and infirm, let him retire and a younger man take his place. This system will give you good instruction in four months.

How Students should be Graduated.—Let this same board examine the students and confer the diploma. Then none will be passed through favoritism or from family connections. It is hard for a Professor to vote against a student who has been attentive to his lectures, whom he knows to be poor and unable to stay longer at college. He will interest, in his behalf, all about the college, and even his fellow students; and hence the Professor will be influenced by the kindness of his heart and not from pecuniary motives, as most usually accused of.

The following is our summary for the improvement of medical education:

1. Have no Professor who is not able and willing.
2. Graduate no one who is not qualified.
3. Let the sessions remain at four months, two sessions as at present.
4. Require ten sessions if not qualified.
5. Let students receive clinical instruction in private practice and in hospital practice.
6. Establish no medical school without a hospital where clinical instruction can be given.

Specialities in Medicine.—This subject was also freely discussed, and we believe the opinion expressed was that one who studies only for one branch is unfit to practice that branch; but one who studies all the branches and finds himself adapted to one branch may make a speciality of that branch, but not to the exclusion of all others; and when he abandons all others he becomes a specialist, and is unfit for membership in the association. These I think are correct principles and receive my hearty support.

How I was treated.—I found a desire on the part of the association that the whole South should be represented, and that they were glad to see me from the extreme South. Several remarks were made on this subject, and the universal opinion was that this was a literary and humanitary body, and should not be disturbed by politics. In this spirit the Convention acted.

Anterior Splints of Dr. Nathan R. Smith, of Baltimore.—After the Convention closed I spent two days in visiting the Hospitals and the principle Surgeons, paying a special visit to that venerable and able Surgeon, N. R. Smith. We met him at the Baltimore Infirmary, where he showed me samples of his anterior splints, which he has lately brought into use. These are made of large wire and applied to the anterior of the leg and thigh, and made so as to suspend the limb from the bed. For many cases of fracture these are better than anything we saw. We learned from Messrs. Tiemann & Co., of N. Y., that very recently he has improved them, and I ordered from them three sizes, which can be seen at the Island City Hospital.

Smith's Instruments for Lithotomy—We were also shown, in the Infirmary, his instruments for Lithotomy, consisting of a groved director with a slide and an external blade to make the incision. The peculiarity about the shaft is that the groove turns to the left side and the slide shows when the gorget is cutting and its point is in the groove. His forceps for seizing the stone have also a peculiarity about them, to wit: in the centre of the bowl of the blades there is a cutting edge to cut the stone in two when it is too large to pass through the incision. The instruments are so perfect we believe we could operate blindfolded and not do much damage. We ordered a complete set from Messrs. Tiemann & Co. They also can be seen at the hospital. We also met several other members of the Baltimore School, who were promising young men. Prof. Johnson showed us a case in a negro that he had operated on with Dr. Smith's instruments, the stone being so large that he had to use his cutting forceps as described above.

The Baltimore School Infirmary is owned by the Faculty, and is kept by the Sisters of Charity. All the profits are given them after all expenses are paid. The building is badly situated and badly ventilated, almost as bad as the Charity Hospital. We have their reports and will give them in tabular form.

PHILADELPHIA HOSPITALS.

Pennsylvania Hospital.—We visited this institution for the first time the evening of the meeting of the Board of Managers. There we saw most of the old physicians of the city and a number of the most wealthy citizens. After the meeting they had a fine collation, of which we were invited to partake.

This hospital is one of the oldest in the United States—was built by private contributions and is kept up by the same. It sold a large amount of its former grounds, and with the money built the Alms House over the Schuylkill river. West, the great painter, donated his painting of "Christ Healing the Sick," which has brought the hospital an income of over $30,000. The house Surgeons and Physicians are elected by the Board of Managers, and the Board by the contributors. They serve for a term of five years for their board and clothes. The Visiting Surgeons and Physicians receive $10 per ticket from the students who attend their clinic lectures. All the business is done by a Board of Managers, and all the employees are paid. The contributors at this meeting passed a law, that in future they would receive nurses and train them as they had done the students. So it is not only a hospital but a hospital school for the students of all the different colleges in the city. Any one can attend by paying for his ticket.

The hospital plan is an H, and, though objectionable, is better than either of the others mentioned. We think their practice in the medical wards not so good as formerly. They have become too expectant and stimulant. See report of Statistics of Hospitals in May and June Nos.

Treatment of Fractures—In Dr. Agnew's wards we saw many cases of fractures treated by extension and sand bags. Extension is made with adhesive strips on the legs and brought down in the instep and there kept apart by a piece of wood; from this end is suspended several brick by ropes over pullies, with the leg extended. The foot of the bed is raised to keep the patient from slipping down. Sand bags are placed on each side to prevent motion.

They also use oakum instead of sponges in dressing wounds, thereby preventing any chance of producing pyemia, as the oakum is only used for one case. Where sponges are used, unless very carefully, they will communicate the disease to others.

In the medical wards we were surprised to learn the amount of whiskey given to a typhoid patent, being pints a day. Upon the whole, we think they have retrograded instead of improved in the last nineteen years passed since we were a student. Their much learning has made them mad.

Dr. Robley Dunglison.—This venerable man, teacher and writer, is still editing his Dictionary and making improvements, but says he has given up his other publications. We had a long conversation with him about his Dictionary, and urged that he should add a synopsis of pronunciation, which would make his Dictionary in medicine what Webster's was in literature, the best in the world. He contended that the pronunciation was defined, and accurately. This we did not dispute, but said those who did not understand Latin or Greek could not understand it. He then said he did not wish his work to be an elementary work—that there were such published, to-wit: Thomas'. This we admitted, and remarked we had that day bought a copy alone for its pronunciation. We did not seem to convince him of the necessity, but we still hope he will make this addition before he closes his useful life.

Parmer's Legs.—We called to see Dr. Parmer at his manufactory of artificial limbs. He gave us the agency for the State, and *we can furnish them to any one, made to order. They only have to come and get measured.* These legs and hands are made of willow wood, and are perfectly life-like. Messrs. Kolbe manufacture artificial limbs of gutta percha, and all manner of autoplastic apparatuses and surgical instruments. They are fine workmen, and will sell cheap. (See their advertisement in this No., with wood cut.) I would like to notice other of the great hospital surgeons, and also publishers and editors, all of whom showed me great attention and gave me more or less of books—(See Catalogue of Books and Pamphlets received)—but it will lengthen out this article beyond its design, and we expect to refer to them in reviews of books sent, &c.

RARE BOOK.

Dr. Toner, of Washington, D. C., sends us the following. It speaks for itself.

Sims, late of Bath, bequeathed the celebrated volume of Servetus, entitled, *Christianismi Restitutis*, to Dr. Sigmond. "The fate of this book," says our informant, "has been not a little singular. All the other copies were burned, together with the author, by the implacable

Calvin. This copy was secreted and saved by D. Celadon, one of the Judges. After passing through the library of the Landgrave of Hesse Cassel, it came into the hands of Dr. Mead, who endeavored to give a quarto edition; but, on the 27th of May, 1723, at the instance of Dr. Gibson, bishop of London, the copies, not half completed, were seized by John Kent, messenger of the press, and William Squire, messenger in ordinary, and were burnt, with the exception of a few. The late Duke de Vaiere gave near 400 guineas for this volume. At his sale it was purchased for 3810 livres. It contains the first account of the circulation of the blood, above 70 years before the immortal Harvey published his discovery, and the theory of John Hunter, at this day a subject of philosophic inquiry. "The life is in the blood" is distinctly advanced and defended, upon the very grounds it is at present supported. The Latin in which it is written is pure and elegant, and was published in the year 1553.—*London paper.*

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REPORT ON THE USE OF PRESSURE IN THE TREATMENT OF GONORRHŒAL AND PURULENT OPHTHALMIA.

By Surgeon Jos. S. Hildreth, U. S. V.,
In charge of Desmarres (U. S. Army) Eye and Ear Hospital, Chicago, Ill.

Read before the American Ophthalmological Society, June 13, 1865.

PREFACE.

It is over thirty years since Pressure was recommended in the treatment of purulent ophthalmia, by Dr. Francis Moore, of Massachusetts, and successfully employed by Prof. Sewell, of Washington, D. C., for the same purpose.

The idea has subsequently been advanced and recommended by others.

Though largely relied on in the management of certain affections of the eye, especially those of the cornea, the practical value of it in the treatment of gonorrhœal and purulent ophthalmia does not appear to be so well known or appreciated as its merits justly demand.

With the best forms of treatment usually advocated and practiced, the prognosis in those affections must be very reserved, when the symptoms indicate any particular degree of severity.

It may be urged that the results given were due to therapeutic rather than mechanical agents.

Pressure, alone, is unquestionably not sufficient to control a high grade of purulent conjunctivitis; yet, if resorted to at the commencement of an attack, and properly kept up, the parts being cleansed twice daily, recovery would doubtless follow, unless the cornea were in an anæsthetized condition. But in the presence of such a dangerous disease, the imperative duty of the surgeon is to avail himself of *all* known practicable means which clinical observations justify.

As a general rule, infantile cases, not permitting the use of pressure, are fortunately more tractable than many others.

Past experience compels me to feel confident, that if all cases of gonorrhœal and purulent ophthalmia cannot be successfully treated, at least very few should be lost.

159 Michigan Avenue, Chicago, Sept. 15. 1865.

Tabular Statement *of all Cases of Gonorrhœal and Purulent Ophthalmia treated in the Desmarres Eye and Ear Hospital, at Chicago, Illinois, from August 26th*, 1864, *to January 15th*, 1865, *with results obtained.*

No.	Names.	Age.	Affection.	Treatment by Pressure.				Results.			
				With.		Without.		Saved.		Lost.	
				Right.	Left.	Right.	Left.	Righ	Left.	Right.	Left.
1	Chapin	23	Purulent Ophtalmia	1	1	..	..	1	1	..	..
2	Case	48	" "	1	1	..	..	1	1	..	..
3	Richards	33	" "	1	1	..	..	1	1	..	..
4	Haight	26	" "	..	1	1	..	..	1	1	..
5	Vosburgh	43	" "	1	..	..	1	1	..	..	1
6	Finn	23	" "	1	..	..	1	1	..	..	1
7	Shimming	20	" "	1	..	..	1	1	..	..	1
8	Ulrich	25	" "	1	..	..	1	1	..	..	1
9	Strong	24	" "	..	..	1	1	1	1	..	..
10	Shafer	39	" "	..	..	1	1	..	1	1	..
11	Smith	25	" "	..	..	1	1	1	1	..	..
12	Doran	17	" "	..	..	1	1	..	..	1	1
13	Gibbs	43	" "	..	..	1	1	..	..	1	1
14	Ellsworth	24	Gonorrhœal Opthalmia.	1	1	..	..	1	..	..	1
15	Essen	40	" "	1	1	..	..	1	1	..	..
16	Mervin	20	" "	..	..	1	1	1	1	..	..

Recapitulation.

	No.	Saved.	Lost.
Eyes Treated with Pressure	15	14	1
Eyes Treated without Pressure	17	7	10

The condition of the above cases at the commencement of treatment with pressure was as follows. Results are also given.

CONDITION OF PATIENTS.

No. 1.—Corneæ panniform and ulcerated; chemosis sero-phlegmonous and large; purulent discharge abundant.

Nos. 2 and 3.—Corneal epithelium of both eyes considerably disturbed; chemosis sero-phlegmonous, firm and large; discharge abundant.

RESULTS, &C.

Pressure was used on both eyes in these three cases.

N [illegible] recovered in good condition, except nebulous spots at seat of old ulcerations of corneæ, whose panniform condition is fast disappearing and vision improving.

Nos. 2 and 3 recovered in good condition.

CONDITION OF PATIENTS.

No. 4.—Right cornea sloughed and lost; left corneal epithelium so disturbed as to seriously interfere with its transparency; chemosis large and phlegmonous.

No. 5.—Cornea of left eye sloughed and lost; right corneal epithelium considerably disturbed; chemosis phlegmonous, large and firm.

No. 6.—In similar condition.

No. 7.—Left cornea sloughed and lost; right affected with central ulceration and perforation; chemosis phlegmonous and very large; great tumefaction of the lids of both eyes.

No. 8.—Left cornea sloughed and lost; right panniform and ulcerated; chemosis very large, firm and phlegmonous; purulent discharge from all abundant.

RESULTS, &C.

Pressure was employed on left eye of No. 4 and on right eye of Nos. 5, 6, 7 and 8.

Nos. 4, 5 and 6 recovered in good condition; No. 7 with central leucomatous spot, artificial pupil practicable; and No. 8 with cornea cloudy and panniform, but constantly improving.

CONDITION OF PATIENTS.

Nos. 9, 10 and 11.—Severe purulent ophthalmia, with large sero-phlegmonous chemosis (No. 10 being phlegmonous;) purulent discharge abundant, and great tumefaction of lids.

RESULTS, &C.

No pressure was used in these cases.

No. 9 recovered both eyes in good condition. No. 10 lost left eye from sloughing of cornea, the right cornea recovering, panniform and nebulous, but improving. No. 11 recovered with synechia anterior of each eye, from perforation of the corneæ.

CONDITION OF PATIENTS.

Nos. 12 and 13.—Severe purulent ophthalmia, accompanied by considerable disturbance of corneal epithelium of both eyes and large sero-phlegmonous chemosis; purulent discharge very abundant; lids greatly tumefied.

RESULTS, &C.

No pressure used, and both eyes lost in each case from sloughing of the corneæ.

CONDITION OF PATIENT.

No. 14.—Cornea of left eye largely infiltrated in its deep "laminæ;" very large and firm chemosis; lids largely tumefied and eye scarcely influenced by recti-muscles; discharge of gonorrhœal pus from both eyes very profuse. Cornea of right eye slightly infiltrated in superficial "laminæ;" chemosis large, phlegmonous and firm; lids much swollen; patient had discharge from the urethra.

RESULTS, &C.

Pressure employed on both eyes. Cornea left eye recovered, opaque from ulceration and perforation; cornea of right eye slightly cloudy, but vision continually improving.

CONDITION OF PATIENT.

No. 15.—Epithelium of both corneæ considerably disturbed; chemosis large, firm and phlegmonous, great tumefaction of lids, and abundant gonorrhœal discharge.

RESULTS, &C.

Pressure applied to both eyes, which recovered in good condition.

CONDITION OF PATIENT.

No. 16.—Corneal epithelium slightly disturbed; large phlegmonous chemosis; great tumefaction of lids, and abundant gonorrhœal discharge from both eyes.

RESULTS, &C.

No pressure used. Recovered in good condition.

From the preceding table and subsequent remarks, it appears that thirteen patients with purulent ophthalmia were treated. In three cases both eyes with pressure, and both eyes in each case recovered.

In five cases an eye only of each patient was treated with pressure, and the other eye without. All the former were saved, and all the latter lost.

In five cases not treated with pressure, one patient recovered both eyes in good condition; one with synechia anterior of each eye; one losing the right and saving the left eye, and two losing both eyes.

Three patients affected with gonorrhœal ophthalmia were also treated.

In two cases both eyes were treaaed with pressure. One patient recovered both eyes, and one lost the left and saved the right eye.

In one case in which no pressure was used both eyes were saved.

The above comprises all cases of these types treated in the hospital from August 26th, 1864, to January 15th, 1865, which I have been particular to describe in order to show the nature of these affections as they manifested themselves, and the relative value of the application of pressure in their treatment.

Those of purulent ophthalmia exhibited an unusual degree of malignity; especially in tendency to destruction of the cornea by infiltration or ulceration, and sloughing "couche sur couche."

Some oculists have suggested, what occurred to me at the time, that many of them were diphtheritic, but I am not satisfied such was the case. At all events, the indications of such disease were as well marked in those treated with pressure as in the others. The cases of gonorrhœal ophthalmia presented nothing unusual beyond what has been described above.

I have been careful and explicit in regard to details, on account of the marked difference in the results obtained with and without pressure in the treatment, which, in all other respects, was the same; and the more so, as in five cases circumstances placed it in my power to witness the difference of treatment on the same individuals.

This became possible from the fact of my entire want of knowledge of the use of pressure in such cases, until circumstances forced me to devise some method of staying the ravages of disease over which I could obtain, by all known means, but little control; and it was not until ten eyes out of twenty-four had been lost, that the idea suggested itself to me, which, like many others, was at once carefully and prudently acted upon.

Twelve hours seemed to justify the means adopted, and after twenty-four hours the change in the left eye of case No. 4, the only one at first attempted, was so decisive as to warrant the experiment on a more extended scale.

The results are given in the table.

What I mean by the use of pressure in the treatment of such cases, is not the application of lint, wet or dry, over the lids with moderate compression, but a *firm*, *hard*, *continued pressure upon all parts of the contents of the orbit, especially the anterior*. This I effect in the following manner:

The lids being closed, the orbit is to be packed, as it were, by means of charpie, or picked lint, (scraped lint or cotton wool is not so serviceable,) in such a manner that all parts about the eye, within the orbit, the anterior hemisphere of the globe, and especially the conjunctiva, shall be acted on.

Care must be taken to fill the grand angle, and to have the charpie evenly and regularly disposed *about* as well as over the globe.

Quite a large bunch should be used for each eye, not only to ensure evenness of pressure, but to absorb the purulent discharge. This being done, compression is made by means of a bandage, or better, a firm elastic band of rubber braid, not less than two inches in width, passing around the head. It should be slowly and regularly increased until the pain, if any there be, in the parts affected, is greatly diminished or controlled, if practicable.

In other words, pressure is to be applied to the eye and surrounding parts within the margin of the orbit to a degree sufficient to so control the circulation as to prevent the destructive tendency of the disease, but not to interfere with proper nutrition. This must, of course, vary with the peculiarities of each case.

But the principle of employing, as constantly as possible, firm, hard, even and continued pressure from the *earliest moment practicable* until the *close of all acute symptoms*, is not to be lost sight of for a moment. The anatomy of the orbit, the mechanism of the lids, and the cushion of adipose tissue posterior to the globe, render this not only possible, but easy.

I have in no instance resorted to it in purulent or gonorrhœal affections of the eye during the acute stages, even after the organ has been irretrievably lost, without greatly diminishing the discharge in a short time, and very materially adding to the patient's comfort in reducing the pain, and modifying subsequent and present staphyloma, as occurred in cases numbered 4, 5, 6, 7, 8 and 12.

While the purulent discharge is abundant, the dressing should be renewed twice during every twenty-four hours. Dry charpie is to be preferred, though moist will answer; yet it is not so elastic.

That pressure will have a potent influence in diminishing the discharge, reducing the tumefaction of the lids and the chemosis, modifying extravasation and exudation, arresting and inducing infiltration of the cornea to become resolved, is now a clinical fact.

The rationale of such action is certainly as simple as the means employed to produce it.

The influence of the virus (be it what it may) induces an extraordinary flow of blood to the affected parts, and often with great rapidity.

Their arterial circulation is taxed to the utmost, and the venous also; while the capillary connecting them is inadequate to the demand imposed upon it, even when distended to the utmost.

Hence the results which unhappily too frequently follow. Compression of the affected parts diminishes the flow of blood into them, so acts upon the capillaries as to prevent their enlargement, stimulating them to perform their functions, besides producing partial anæsthesia, and controlling or modifying the pain.

Having dwelt sufficiently, I think, upon the uses of pressure in these cases, I now propose to allude to the treatment I have found in other respects most beneficial. Before doing so, a division of cases will be desirable, to illustrate my reasons for adopting certain means.

1st. Those cases in which pain, swelling, heat, redness and phlegmonous or phlegmono-serous chemosis are decided and well-marked, and which, usually occurring in patients of full habit, or having that condition favorable to the formation of the so-called "plastic lymph," may be called Sthenic.

2d. Those characterized by "serous puffiness" of the lids, serous or sero-phlegmonous chemosis, little pain, discharge thin, and great tendency to infiltration on the part of the cornea—conditions which usually occur with persons whose systems have been reduced by scurvy, typhoidal disease, chronic diarrhœa, &c.—and which may be termed Asthenic.

Before proceeding to detail the medical, I must allude to certain surgical means, frequently found necessary. It often occurs that the cornea becomes anæsthetized, so much so that the patient feels very imperceptibly the contact of a foreign body—as the point of a small roll of twisted paper, or a small camel's hair brush—and the pupil cannot be influenced by atropia, or only partially so, though *no* adhesions exist between the iris and the capsule.

I have found infiltration of the cornea to follow very closely upon such complications. Deep scarifications, circular or radiated, of the chemosis, or cups to the temple, have, in my hands, been very unsatisfactory in removing or preventing such conditions. No better results seem to follow paracentesis of the anterior chamber, "repeated" or otherwise. Unless largely infiltrated, I have frequently succeeded in saving the cornea in such cases by means of Hancock's operation of division of the "ciliary ring." Besides its preventing infiltration and sloughing of that important membrane, the patient will suffer much less pain during the continuance of acute symptoms. Unless the cornea is in an anæsthetized condition, is beginning to be infiltrated, or shows symptoms of sloughing and ulcerating, such an operation should not be resorted to.

I have frequently found the indications for this operation, as mentioned above, to exist with other affections of the eye, and have relieved them in the same manner; but the subject would, of itself, form an extensive article, and I shall therefore not dwell longer upon it here, beyond remarking that Hancock's operation, in relieving such symptoms and conditions, cannot be relied upon to take the place of pressure; neither will the latter, under similar circumstances, relieve the necessity of dividing the "ciliary ring."

The utility of scarifications, deep, circular or radiated, of the chemosis is too well known to be dwelt upon here.

For local application I rely mainly upon bromide of ammonium, atropia, and nitrate of silver. In sthenic cases I prefer the use of bromide of ammonium dissolved in glycerine—forty to sixty grains to an ounce of pure glycerine—which is applied twice daily to the conjunctiva, ocular and palpebral, by means of a camel's hair brush.* It may be employed oftener in some cases, but this will be found, as a general rule, sufficient. Under its influence purulent, and especially gonorrhœal opthalmia, appears to become rapidly modified, as I have frequently had occasion to demonstrate. The addition of ten grains of tannin to one ounce of the solution adds somewhat to its efficacy, but this is not indispensable.

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* The following will be found serviceable for gonorrhœa :

Bromide of ammonium,	dr.ss—dr.j
Tannin,	dr.ij
Aqua,	oz.ij—Misce.

Sig.—One half ounce to be injected pro re nata.

For asthenic cases the nitrate of silver is most serviceable. I prefer to apply it gently to the mucous membrane of the lids, neutralizing any excess of the salt by proper means. Blood may or not be taken from the lids, the chemosis or the temple, after the use of bromide of ammonium or nitrate of silver; but this must depend on the size of the chemosis and state of the patient. Atropia will be required to dilate and so maintain the pupils.

For general treatment in sthenic cases I prefer muriate of ammonia in alterative doses, from three to five grains every one or two hours. Asthenic cases are benefitted by muriated tincture of iron, five drops every two hours or oftner, if the patient will bear it. Permanganate of potassa is also useful, in ¼ grain doses, every two or three hours. But it is evident that all general means must be adapted to the existing condition of the patient. The treatment for purulent and gonorrhœal ophthalmia may, therefore, be summed up as follows:

1st. If anæsthesia of the cornea exists, or it is infiltrating, and especially if the pupil will not yield to the influence of atropia, Hancock's operation of division of the "ciliary ring" is indicated, care being taken to divide all its fibres from the insertion of the iris to its posterior limit.

2d. Application of a solution of bromide of ammonium, (40 to 60 grs. to oz. j. pure glycerine,*) or nitrate of silver to conjunctiva; the former to all parts of the conjunctiva, and the latter to that covering the cartilage of the lids only.

3d. Scarification of the lids and deep incisions into the chemosis, if required, removing the blood with tepid water so long as it continues to flow.

4th. Atropia in solution (iv. grs.–oz. j.) sufficient to dilate the pupil.

5th. Application of firm, hard, continued pressure, as soon as practicable, and continuance to the close of acute symptoms.

6th. Remove the dressings twice during every twenty-four hours, until the purulent discharge ceases.

7th. Two applications daily of bromide of ammonium or one of nitrate of silver will be found sufficient. Atropia may be used twice daily or oftener, but care should be taken not to continue its employ beyond *producing* and *maintaining moderate* dilatation of the pupil.

8th. A constitutional treatment adapted to the condition of the patient.

It is evident that no single remedy or means should be exclusively relied on in the treatment of purulent or gonorrhœal ophthalmia; but each case, and even each eye, must be managed in accordance with its existing conditions, and the varying symptoms promptly met by appropriate means. In this way we shall be justified in prognosticating favorable results in most cases.

In closing, it is sincerely hoped the special principle of treatment so prominently set forth in this article, as well as all others having anything unusual of application or otherwise, will be rigidly tested, and the results made known to the profession.

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* Glycerine perfectly pure should be used.

AMERICAN MEDICAL ASSOCIATION.

FIRST DAY—MAY 1.

The Seventeenth Annual Meeting of the American Medical Association was held in the city of Baltimore, at Concordia Hall.

The Association was called to order at 11 A. M., Tuesday, May 1, by the President, Dr. D. Humphreys Storer, of Boston.

On motion of Dr. Bissell, of New York, the ex-Presidents and ex-Vice-Presidents were invited to take seats on the platform.

The Rev. Dr. Spies, of Baltimore, was introduced, and opened the meeting with prayer.

Dr. C. C. Cox, on behalf of the Committee of Arrangements, in an eloquent address, gave a warm welcome to the Association, and hoped that when the short stay of the members was ended, they would have cause to retain kindly remembrances of the Monumental City. He expressed his regret that so few delegates from the South were present, and hoped that now that peace had come, they would again return, and aid the Association with their learning and experience in the great work the profession had before it. He paid a high compliment to the fidelity of the surgeons on both sides during the late war, and referred in pathetic terms to the many learned men who have been taken away by death since the Association met in Baltimore eighteen years ago, and closed by again warmly welcoming the visiting brethren.

THE CASE OF DR. MONTROSE A. PALLEN.

Dr. Cox then offered certain documents exculpating Dr. M. A. Pallen, of Missouri, from the charges brought against him at the meeting in in Boston, and for which he was then expelled.

On motion of Dr. W. Jewell, of Pennsylvania, the order of business was suspended, in order to allow these to be received.

Dr. Cox moved that the papers be referred to the Committee on Medical Ethics, with a request that they report promptly.

Dr. Ordway, of Boston, was disinclined to have the subject go before a committee, and contended that Dr. Pallen should be as speedily and publicly invited to a participation in the business of the Association, as he had been hastily and unjustly expelled at the previous meeting.

Dr. Davis, of Illinois, favored the reference, because he thought, as the action of last year had been placed upon the record of the Association, that all the action reviewing the work of that meeting affecting Dr. Pallen should be fully spread upon the record. He would like to have it referred to the Committee on Ethics, with instructions to report as early as practicable.

After much discussion, the whole matter was finally referred to the Committee on Ethics, with instructions to report forthwith.

Dr. Worthington Hooker, of New Haven, stated that he was the only member of that committee present; whereupon Dr. Brinsmade, of New York, and Dr. Davis, of Illinois, were added to the committee.

Dr. Thomas E. Bond, of Baltimore, moved that the committee, to whom was referred the case of Dr. Pallen, be instructed to report the expression of most profound regret that the Association should have been hurried into its unjust action to Dr. Pallen; and that they express the hope that Dr. Pallen would accept such acknowledgment as an expression of a frank apology for the great wrong done him. This, together with an amendment, was laid on the table.

Dr. William B. Atkinson, of Philadelphia, the Permanent Secretary, then called the roll of members.

On motion of Dr. Cox, it was determined that the successive morning sessions of the body should commence at nine o'clock. He afterwards announced the arrangements which had been made for the meeting of the several sections during the afternoons.

Also, on motion of Dr. Cox, Dr. James E. Reeves was invsted to a seat with the Convention.

Dr. Bond, on motion, then brought up his motion with reference to Dr. Pallen

Dr. Storer, of Massachusetts, explained that the charge against him was not of disloyalty, but that he had been guilty of the grossest unprofessional conduct in attempt to poison the Croton Aqueduct.

Dr. Jewell, of Philadelphia, called the gentleman to order, saying that the resolution of Dr. Bond was out of order.

Dr. Holton, of Vermont, thought it rather strange to appoint a committee to report in the premises, and then instruct them how to report.

The suggestion of Dr. Bond, which had been incorporated into a resolution, was finally laid on the table.

Dr. Hooker, Chairman of the Committee on Ethics, then presented the following report, which, after being warmly discussed by Drs. Owens and Bond, of Maryland, and Tyler, of Washington, was finally adopted :

" The Committee to whom were referred the papers in relation to the expulsion of Dr. Montrose A. Pallen, at the meeting of the Association in Boston, respectfully report:

" That they have examined the documents and evidence referred to the Committee, embracing papers endorsed by General U. S. Grant, the Vice-Consul of the United States at Montreal, and many citizens of Missouri, and are fully satisfied that the statements on which his expulsion was based were entirely unfounded; and, therefore, regretting the injustice done, both to Dr. Pallen and the Association, we recommend the following resolution :

" *Resolved*, That the preamble and resolution adopted by the Association at its annual meeting in Boston, June, 1865, expelling Dr. Pallen, be hereby rescinded; and that Dr. Montrose A. Pallen be restored to his previous membership in the Association."

On motion of Dr. Ordway, a Committee of three was appointed to wait upon Dr. Pallen, and inform him of the action taken in his case; and on motion of Dr. Owens, Dr. Cox was made chairman of said committee.

Dr. Pallen was then presented to the Association, and thanked them in an appropriate and feeling manner for the action they had taken in regard to his case.

THE PRESIDENT'S ADDRESS.

Dr. D. Humphreys Storer, the President, followed with his annual address. His subject was that of Specialities in Medicine. The ground which he took was one of encouragement to all such worthy and qualified young men as chose to confine their particular attention to one branch. The address was a well written and interesting one, and commanded the most respectful attention of all present.

On motion of Dr. Holton, of Vermont, the thanks of the Association were tendered to the President, and the address was referred to the Committee on Publication.

The reports of the Special Committees were then called for, and all the papers that were presented were referred to appropriate sections.

The following voluntary papers were then in turn offered, and in like manner referred: "On Luxation of the Hip-Joint, Nine Months' Standing, &c," by Dr. L. A. Sayre, of N. Y.; "On Improvements in Water Pipes," by Dr. J. C. Draper, N. Y.; "On Extirpation of the Uterus," by Dr. H. R. Storer, of Boston; "On Permanganate of Potassa as a Purifier," by Dr. Craig, of D. C.; "On the Application of Local Anæsthesia to Practical Medicine," by Dr. J. Solis Cohen, of Philadelphia; "On Aluminium in Dentistry," by Dr. Mason, of Mass.; and "On Exsection of Lower Jaw," by Dr. D. C. Enos, of N. Y.

On motion of Dr. Cox, Dr. E. Brown-Sequard was invited to deliver a lecture before the Association upon the treatment of nervous diseases at 11 A. M., on Wednesday.

On motion of Dr. Davis (Ill.,) Dr. H. Marsden, of Quebec, was elected a member by invitation, and invited to a seat upon the platform.

The meeting then adjourned to meet at 9 A. M. on Wednesday.

PROMENADE CONCERT.

During the evening a promenade concert was given to the members of the Association by the Committee of Arrangements, at Concordia Hall. Although the evening was a stormy one, the attendance of ladies and gentlemen was unexpectedly large. At the conclusion of the concert, the company was regaled by a magnificent supper.

SECOND DAY—MAY 2.

The Association was called to order by the President, Dr. D. H. Storer, at 9 A. M.

The Committee on Epidemics, Meteorology, etc., having been called upon, Dr. Davis stated that Dr. Hamill had presented a report which he had taken to the Section on Epidemics, etc.

Dr. Cox made an additional report from the Committee on Arrangements on Railroads, that invitations had been received from Drs. Smith and Donelson, for the members of the Association to visit their houses that evening. He also recommended the following gentlemen as members by invitation: Drs. Jno. A. Reed, W. Whitridge, L. M. Eastman, of Baltimore; Peter Parker, of China. They were elected.

On motion of Dr. Davis, the order of business was suspended.

The report of the Committee on Publication was read and accepted.

On motion of Dr. Sayre, of New York, the Publishing Committee were authorized to enforce strictly due care in regard to proofs, etc.

The Treasurer then read his report, which was referred to the Committee on Publication.

On motion, the order of business was resumed.

On motion of Dr. Davis, a recess of fifteen minutes was taken by the Association, to allow of the appointment of members of the Nominating Committee.

THE NOMINATING COMMITTEE.

On the resumption of business, the following members of that Committee were announced:

J. C. Weston, Me.; J. C. Eastman, N. H.; Wm. McCollim, Vt.; J. R. Bronson, Mass.; D. King, R. I.; W. Woodruff, Conn.; J. C. Hutchinson, N. Y.; W. Pierson, Jr., N. J.; H. F. Askew, Del.; John L. Atlee, Pa,; J. J. Cockrill, Md.; M. A. Pallen, Mo.; N. S. Davis, Ill.; W. Lockhart, Ind.; J. M. Withercone Iowa; N. R. Bozeman, Ala ; C. M. Stockwell, Mich.; H. Van Dusen, Wis.; T. A. Atchison, Tenn.; G Fries, Ohio; G Tyler, D. C.; W. M. Charters, Ga.; J. Simpson, U. S. A.; N. Pinkney, U. S. N.; Greensville Dowell, Texas.

Dr. W. Hooker offered the following resolution, which was unanimously adopted:

"*Resolved,* That no report or other paper shall be presented to this Association unless it is so prepared that it can be put at once into the hands of the Secretary, to be transmitted to the Committee on Publication."

Dr. Wister, of Pa., offered the following, which was adopted :

"*Resolved,* That Drs. Grafton Tyler, W. P. Johnson, and James M. Toner, of D. C., be a Committee to procure a room in the Smithsonian Institution, for the preservation of the Archives of the Association."

The Committee on Medical Education not having prepared a report, Dr. J. F. Hibberd offered instead thereof the following preamble and resolution, and moved that it be adopted as the sentiment of the Association :

" *Whereas,* Two-thirds of the Medical Colleges of the States of Ohio, Michigan, Illinois, Iowa, Missouri, Kentucky, and Tennessee, by delegates in convention assembled in Cincinnati, on the 24th of April ult., did, by resolution unanimously adopted, declare their willingness to make their annual college sessions to continue for six months, and to establish a uniform rate of fees, if the other principal colleges of the country will co-operate; now, therefore,

"*Resolved*, That the American Medical Association hereby expresses its warmest approbation of the action of the above recited colleges, and expresses the hope that every Medical College in the Union will concur in the proposition thus made."

On motion of Dr. Taylor, of Iowa, its consideration was postponed till 11 A. M. on Thursday, to be acted upon in Committee of the Whole.

Dr. C. A. Lee, of N. Y., commenced reading his report upon Medical Literature. He divided up his subject as follows: I. Periodical Medical Press. II. Medical Literature of the War. III. Literature of the Sanitary Commission and of Sanitary Sciences. IV. State and County Society Transactions. V. Literature of Special Subjects and of Specialities. VI. Literature of Pharmacy and Materia Medica. VII. Of Vital Statistics. VIII. Of Life Assurances. IX. And of Introductory Lectures.

He was interrupted at 11 for the regular order of business, which was the lecture of Dr. Brown Sequard, on the Treatment of Functional and Organic Diseases of the Nerves. We hope to give our readers a detailed report of this very interesting lecture in a future number.

On motion of Dr. Raphael, of N. Y., the thanks of the Association were tendered to Dr. Brown Sequard for his interesting, able, and eminently practical lecture, and he was requested to furnish an abstract for publication.

Dr. C. A. Lee then resumed the reading of his report.

After this had continued for some time, on motion of Dr. Toner, the further reading was discontinued, and the paper referred to the Committee on Publication.

Dr. Gross, Chairman of Committee on Medical Education, reported that he had not prepared a report, and asked that the Committee be discharged, which was granted.

REPORT OF PRIZE COMMITTEE.

Dr. E. Eliot, Secretary of the Committee on Prize Essays, read the report of that Committee.

On breaking the seals, Dr. W. F. Thomas, of New York city, was ascertained to be the author of the "Essay on Health in Cities," etc., and was entitled to the first prize, and Dr. S. R. Percy, of N. Y., on "Digitaline," etc., to the second.

On motion, the paper on Angular Curvature of the Spine was referred to the Section on Surgery.

The report of the Committee on Medical Ethics having been offered, it was made the special business for 9.30 on Thursday.

Dr. Marsden, of Canada, having been announced as desirous of making some remarks on Cholera, On motion, it was agreed that he should follow immediately after the report on Medical Ethics.

Dr. Cohen offered a paper on Paralysis of the Vocal Chords and Aphonia, etc. Referred to the Section on Surgery.

Dr. H. R. Storer offered a paper on the "Clamp Shield;" an instrument designed to lessen the dangers of extirpation of the uterus by abdominal section.

Dr. Bozeman, of Alabama, was introduced to the Association, and on motion of Dr. Holton, he was made the member of the Committee on Nominations for Alabama.

Dr. Askew offered the following resolution on the death of Dr. Cowper, which was unanimously adopted :

"*Whereas*, We have heard with profound regret of the death of our deservedly esteemed friend and associate, James Cowper, M. D., of Delaware, late Vice President, and one of the founders of the National Medical Association; and whereas, we desire to express our high appreciation of his worth as a man, and valuable and untiring energy in the cause of medical science; mild, modest, and unassuming, of devoted piety, he was firm, constant, and reliable; a strict adherent to the ethics of the profession, he occupied a front rank, and died beloved, respected, and lamented by all who knew him.

"*Resolved*, That in the death of Dr. James Cowper we have lost a friend and brother, and that we sincerely and deeply condole with his sorrow-stricken widow and family, and that the Secretary be authorized to forward a certified copy of these resolutions to his family."

Dr. Toner, of D. C., offered the following resolution, which was adopted :

"*Resolved*, That instead of yearly reprinting the list of members of the American Medical Association with the Transactions of the same, the Secretary be instructed to prepare and have printed in pamphlet form, a triennial alphabetical catalogue, containing the Constitution of the Association, and a list of members, with their full names, designating their residences, the year of their admission, arrearage of yearly dues, the offices they may have held in this body, and in case of death or resignation, the year, and distribute the same among the contributing members."

On motion, the resolution was referred to Committee on Publication.

Dr. J. C. Hughes, of Iowa, offered a paper on Lithotomy, which was referred to Section on Surgery.

Dr. Taylor, of Iowa, introduced a resolution for the appointment by the President of the Association of a member from each State, to memorialize Congress for an appropriation to publish the reports and documents of the Surgeon-General of the United States.

Dr. Pallen recommended that the reports and documents of the like character connected with the rebel army, be also referred to the same committee for access to the same. Dr. Pallen, after some discussion, withdrew his amendment.

The original motion was carried.

It was then moved that the President announce said Committee on Thursday morning.

The meeting then adjourned.

SECOND EVENING—SOIREES AT PRIVATE RESIDENCES.

The evening was occupied by the members of the Association in responding to the kind invitations of the physicians of Baltimore to soirees at their respective residences. The houses of Drs. C. C. Cox, Bond, Surgeon Simpson, U. S. A., Professor N. R. Smith, and others, were thrown open. The entertainments were of such a character as reflected great credit upon the taste and hospitality of the gentlemen concerned.

Called Meeting of the Galveston Medical Society.

A called meeting of the Galveston Medical Society was held at the Office of Dr. Dowell, August 10th, 1866.

Dr. E. Randall, the President, called the meeting to order. Minutes of the previous meeting read and adopted.

The subject of Cholera was then introduced. The origin of this disease was clearly traceable to the U. S. troops landed at this port by the Steamship Texas July 22d. The disease was confined to these troops for a time, but finally appeared among the citizens. The total number of cases met and treated by the members present, up to this time, has been thirteen, of which seven have proved fatal. Other members and physicians of the city are known to have had cases, but the result is not known.

A general interchange of opinions was expressed, particularly with reference to the mode of treating the disease.

The meeting adjourned to meet again at the usual hour on Friday evening next.

C. H. McGILL, M. D.,
Recording Sec'y pro tem.

Galveston, August 10th, 1866.

LIST OF OFFICERS AND MEMBERS

OF THE

FORT BEND COUNTY MEDICAL SOCIETY.

OFFICERS.

GEORGE A. FERRIS, President,
JOHN R. PETTUS, Vice-President.
SAMUEL A. STONE, Secretary,
E. A. FORD, Treasurer,
J. E. GOODLETT, Corresponding Secretary,
J. A. THROCKMORTON, Censor,
B. W. BELL, “
J. C. RUSSELL, “

MEMBERS.

G. A. Matthews,
J. W. Neeley,
E. T. Pilant,
Ed. Connor,
E. S. Alexander,
E. B. Schley,
Z. L. Sherrard,
Jno. M. Wellborn.

The Constitution of the above Society is very much like the Galveston Society; and they have also adopted its Code of Medical Ethics and formed a Fee Bill suitable for their locality.

We hope every County in the State will do likewise.

THE
Galveston Medical Journal.

VOL. I. AUGUST, 1866. No. 8.

NEW YORK AND HER HOSPITALS.

The first hospital I visited was the Women's Hospital, under the charge of Dr. Thomas Addis Emmet. Dr. Emmet is the successor of Dr. Sims, for whom the hospital was established. It is supported by contributions from wealthy and distinguished ladies, and is under their management. I was frequently at this hospital, and saw Dr. Emmet operate for vesico-vaginæ fistula. He uses only silver wire, without the button, the wires being tightened and pressed to the right and left alternately. I saw several cases that he had cured by one single operation. I also saw him apply the Sponge-Tent to the mouth of the uterus, and effect a dilatation in a few hours He also exhibited his speculum, which is similar to Sims, only it is self-retaining, requiring no assistant. The Doctor is one of the most indefatigable Surgeons we ever saw; and we could not help pittying him, for he would operate for four and five hours at a time. These cases are the most tedious in surgery, and would try the strength and patience of any man. The Doctor gave us several monographs, which we will insert in this journal from time to time. I was pleased to find he was a native of Charlottesville, Va., and a fellow-countyman of mine.

DR. N. R. BOZEMAN.

We met this able Surgeon at the Convention as a delegate from Alabama, but he has now settled in New York, and showed us every kindness. We visited him at his house in 27th street, between 5th and 6th Avenues, No. 40. He gave us several monographs, and has consented to become a contributor to this Journal. His reputation is world-wide, and he is succeeding in New York, where there are so many able Surgeons. We were pleased to see the friendship existing between him and Emmet, though they are pursuing the same speciality. Dr. Bozeman still urges the advantage of his button suture and says the parts can be better coaptated, and do not require so many ligatures. Our experience in veseco-vaginal operations is very limited, and we are not able to express our opinion of the merits of the button suture. We used it in all our cases, and Dr. Bozeman has succeeded as well as any man. If the button can be dispensed with, it saves great trouble, but if double the number of sutures have to be inserted where it is not used there is nothing gained. Statistics alone can decide these questions. Dr. Bozeman uses the silver ligature in the treatment of varicose veins, and has operated many times with success, and in no instance with any bad effects. We will publish his monograph on this subject.

BELLEVIEU HOSPITAL.

This hospital is situated on the bank of East River, in a square between 26th and 27th streets, and is enclosed by a high brick wall. The buildings consist of three separate buildings, oblong squares, three stories high. The wards are large and usually well ventilated, but have iron gratings and galleries on both sides, which are very convenient, but prevents the sun from shining on the walls, and prevents the effluvia from ascending so it can be driven off. One building is specially appropriated to females, and is to the east of the main building. There is a dead house at the southwest corner, over which are the college rooms of the Bellevieu Medical College. This school is advertised in the present No., and it is equal to any school in the world. It is costly, as the pupils have to stay longer, and consequently their board will become quite expensive to them. Underneath the lecture rooms is a room for the dead that are found in the city, where they are kept until recognized by their friends, and where the Coroner holds his court. Adjoining this are the dissecting rooms. These rooms have stone tables and gas lights, and every convenience for dissections. Upon the whole every arrangement is nearly perfect. From this building a steamboat leaves every day for Blackwell's Island, and takes off such patients as are able to go.

We visited this hospital with Dr. L. A. Sayre, one of the ablest and boldest Surgeons in N. York. He has made great improvements in orthopædic surgery and in the treatment of anchylosis by resection.

We saw him treat several cases at his private office, as well as at the hospital. By means of an extension apparatus he relieves the inflamed joint from pressure. The apparatus is manufactured after his own plan and consists of a hip strap with a moveable joint over the external side: this is attached at the knee by adhesive straps and a bandage, to which the iron bar is fastened, and this bar is extended by a key, and when the pressure is entirely removed, the patient can walk with a stick, and without pain. We saw him exhibit its operation to his class, at the hospital, on a little boy. By relaxing the extension apparatus, it would produce pain, and the little fellow would cry out, but by again extending it he could walk, and you might take hold of the limb and shake it and it would not make him complain. We were surprised at the number of cases he showed us, and told him we had not seen a dozen in our life. We think coxaria, and its kindred diseases, are much more common there than in the South.

Dr. Sayre is the Quarantine Surgeon of New York, and believes strongly in the infectious nature of cholera, and firmly asserts that it can be fenced out. He told us that when the Atlanta reached N. York last year he separated the well from the sick by crockery placed between, so they could not pass and repass, and that not a single case occurred amongst the well, and no case originated outside of its first place of appearance. He does not believe that the poison extends more than ten feet, and that there must be contact with the patient or with some of his ejections to produce the disease. When the healthy subject is thus brought in contact it is preeminently infectious. While we were with him in the hospital he gave a lecture on epilepsy over a patient that had a paroxysm while he was making his rounds. He cords the arms and the legs during the fit—shocks the system with cold water. He treats epilepsy with large doses of Bromide of Potash, even to ounce doses. He spoke very confidently of its good effects. It is also spoken highly of by late writers, and well deserves the attention of our physicians.

Here we saw, for the first time, the application of Arnott's Water Beds. These are made of gutta percha, and filled with water; they have a tube with a screw, which enables one to put in warm or cold water, as best suited to the patients. A poor fellow, who had both legs broken, was placed on this bed and his legs suspended by splints to a frame above, and he seemed quite comfortable and cheerful. Half beds, and also pillows, are made of the same material and on the same plan. They are very useful in typhoid cases, and in all cases where the patient is liable to have bed sores. We have ordered some for the Island City Hospital. We here saw treated a case of fracture of the clavicle by adhesive straps. The adhesive straps are so placed as to hold the arm upwards, backwards, and outwards; also, a strap is passed over the point of fracture, and there holds down the fractured ends. This is a great improvement on Fox's or any other apparatus we have seen, especially for children, who will almost always work loose or get undone the bandages.

NEW YORK HOSPITAL.

This is situated on Broadway, in the heart of the city, and is the oldest hospital in New York. The buildings are three in number, solid blocks, three stories high. It is well ventilated by artificial ventilators in the walls, but it is too much confined, and can never have pure air, from its locality. Here we saw many cases of syphilis, of every variety and form, but nothing new in treatment or of peculiar interest. The house was neatly kept, and the bedsteads and bedding were better than any we saw. We visited several other hospitals, but saw nothing worthy of note.

We paid Dr. A. P. Merrell several visits. He is one of the best physicians and writers of the day, and what is more, though he is an old man, he keeps up to the improvements, and even goes further than his younger brethren in the use of new remedies, of which the readers of this Journal have had several instances in his correspondence. The Doctor condemns, in strong terms, the present tendencies to the expectant and do nothing system of practice, which is becoming so popular at the North. He says mercurials and quinine are as necessary at N. York as at Memphis, periodicity in disease is almost as common. The Doctor resided a long time in the South, and was Professor of Theory and Practice of Medicine in the Medical School at Memphis. He has seen much of yellow fever and cholera, and perhaps no one better understands the Southern diseases than himself. We gave a biographical notice of his work on fevers in the April No. of this Journal, which book we hope all our physicians will get and read.

THE ACADEMY OF MEDICINE.

We had the pleasure of attending a meeting of this association, and was introduced to the President, Dr. Anderson, by Dr. Sayre, who introduced us to the Academy. We shall ever feel grateful for the manner in which we were received, though we must say we felt as little as we ever did in our life. We presume there is no body of physicians in the world superior to this association. We were surprised at the great number of grey and venerable heads assembled there—writers and teachers of wide reputation, who did deign to come out and hear what could and would be said upon medical science. It made us feel for our Society, where we scarcely ever get together a quorum. This close attention to their profession is what has made them great.

The principle subject of discussion was Hygiene. Dr. E. Harris, President of the Board of Health, read a paper on the Disinfectants in Cholera and the Hygiene of New York city. This address was well received, and there was no objection to the theory advanced of the infectious character of cholera. Not even by Dr. Anderson, the President, who made a speech at the Association against the recommendation to Congress to establish quarantine, and his speech decided the fate of the resolution on that subject before the Convention.

Dr. Bell made several remarks on the disinfectant powers of hot air and steam, the substance of which we have copied from the N. York Medical Record, of August 1st, 1866.

One of the members exhibited samples of the sea weed, (Digitata,) which is now being used in the making of bougies and cones for dilating the urethra and the mouth of the womb. The peculiar character of this substance is, that it will swell and dilate to nearly double its dry size, and when made into bougies can be used for dilating the urethra in cases of stricture, and also the mouth of the womb in cases where sponge-tents were formerly used. This substance admits of a fine polish, and is not easily torn or broken. Messrs. Tiemann & Co. sold us a bougie made out of this substance, which we hope to apply to a good use.

Dr. Sayre brought before the Academy the action of the Board of Health in allowing Homœpathists to take charge of cholera hospitals, asked Dr. Post to make an explanation of the action of the Board. What the Doctor's apology was, we did not fully comprehend, but we understood that he did not sanction any such course, and ignored the whole act. The Society rebuked the course pursued by the Board and affirmed that it was just ground for expulsion, and if the Academy endorsed it they would not be admitted into the American Medical Association. All of which we thought was right and proper, and will be sustained by the medical press. We do not war on any medical sect. All we ask is, that unless they come with clean hands they must not be admitted to equality, nor their opinions should not have any influence, and when an alopath so looses his mind as to leave our general Armentara Medica to follow after infinitisimals he should be expelled, and no regard paid to his opinion. To do otherwise, we admit medicines are nullities or we have not got sense enough to use them.

THE PRESIDENT OF THE BOARD OF HEALTH—DR. ELISHA HARRIS.

We called on this gentleman at his office the next day, and spent a few minutes with him. He gave us copies of the law establishing the Board of Health, and all the Board's forms of registry and reports to the city and legisluture. These I have arranged and sent to our representative to have a law of registry established in this State. The great importance of keeping a general register of births, deaths and marriages is not fully appreciated by our people. It is peculiarly necessary for our State, where so many questions of a legal character are decided by the statutes of limitations; and all know how uncertain and irregular are family records, independent of the many facts of great importance to medicine. We were specially required by the Association to perform this duty. Nearly all the States have adopted registry laws on a very extended scale, but we think those of N. York are the best and most complete.

MESSRS. GEORGE TIEMANN & CO.

At this establishment we were shown a number of new and improved instruments. Amongst the number was an Endoscope, for examining the urethra and bladder. With this instrument one can examine himself. The instrument consists of a leather band, that is buckled around the body; to this is attached a large-sized catheters, having a magnifying lense in the curve; to this is attached a mirror—this exposes every part of the urethra by turns, and with the lense the interior of the bladder can be well seen. This instrument is becoming of general use in the explorations of the urethra and bladder, in cases of gravel and stricture. It is to the urethra and bladder what the ophthalmoscope is to the eye.

LARYNDOSCOPE.

Of these they had several varieties. By its assistance you can expose all the posterior naries and the bronchia, and it is said that the bifurcation of the bronchia can be seen. Any one can duly appreciate its use and value in affections of the throat.

KNIFE FOR MICROSCOPIC SECTIONS.

We also saw a knife that had two blades for making microscopic sections. It could be set at any width necessary, and is a beautiful and useful instrument.

A great many varieties of apparatuses for treating club foot, curviture of the spine, Torti Colis, &c.

A score of instruments for the radical cure of hernia; amongst the number we recognized Wertzer's, Rothmann's, Nott's; a needle of a peculiar fashion, after the manner of the needle made for seaming up horse collars, and many others, whose manufacturers we do not remember.

A new syringe for medicated fluids, and an instrument to produce anæsthesis by ether, &c., &c. We will, from time to time, give engravings of these, with an account of their special use.

THE BLIND ASYLUM.

We were much interested in this institution. Here we saw children taught to read and write well; heard them answer any question in geography or arithmetic; saw the perfectly blind making brooms, hair and moss mattresses; saw a perfectly blind woman thread her needle quicker than we could; saw her measuring off and cutting out mattresses by a board invented by a blind man; heard several young ladies play on the piano that were perfectly blind, taught by blind teachers. The teachers in nearly all the departments were blind. They taught spelling accurately—would correct the least error. The little Misses manufacture a variety of toys in glass beads, which are sold to visitors for their benefit.

None are received into this Institution who are not hopelessly blind. The citizens of New York State are admitted free, but patients are received from anywhere upon paying their tuition and board.

We also visited the Eye and Ear Infirmary, but we did not see anything new or interesting. There appeared to be hundreds of out-door patients, and it took several hours for three or four surgeons to examine them all.

We saw many other institutions, but they do not immediately concern our profession, and would be out of place in a medical journal.

WILL'S HOSPITAL, PHILADELPHIA.

On our return we visited Will's Hospital for the treatment of diseases of the eye. We were accompanied by Dr. J. C. Davis, formerly of Galveston. Here we saw every improvement in the treatment of diseases affecting the eye. This Hospital is well arranged for eye diseases, and has an ample open space both south and north. It has an able medical staff; amongst them we met Dr. White, who showed us some new instruments for the eye; amongst others a scoop for the removal of particles of the lense in the operation of Extraction. This Hospital was built by a donation from Wills, and accommodates from forty to sixty patients. See report, in former number, of Hospitals.

THE EPISCOPAL HOSPITAL, PHILADELPHIA.

We cannot leave this city, without expressing our admiration of this hospital, though we did not go into the building, as we were too feeble, but its structure is equal to any in the world, and is a model for all. It comes nearer to the present improved plans than any we have yet seen. Hammond speaks well of it, and even feels proud of it as an American structure, and Mr. Ch. Sarvazan (in his work on Hospitals) speaks of it in eulogistic terms. It is certainly equal to any in its natural ventilation and its dimension of wards—30 feet 10 inches wide, 120 feet long, 16 feet high, 120 feet of surface, and 2000 cubic feet. There are four pavilions that contain about 325 beds. The building is two stories above the basement and the centre building contains the chapel, amphitheatre for surgical operations, and the pavilions are two on each side of this main building connected to it by iron corridors. It is under the control of the Episcopal Church.

SURGEON GEN. A. K. BARNES.

We called on the Surgeon General with Dr. Toner. He showed us many specimens of drawings from the microscope; amongst others the *Trachina*. He has the large size microscope, spoken of in our April No., with a focus of 1-50 of an inch. It is the only one in the United States. He said that there was not much difference from this and one of 1-18 inch focus when used with reflectors, and showed us samples of both. We were invited to visit the Army Medical Museum, but owing to the want of time we were unable to do so. We were surprised to find, upon enquiry, that there was no published report of Marine Hospitals. This, we think, is a great omission, as seamen have peculiar diseases and come from every clime under the sun; and we are required to make exact reports every month specially to the Collectors. This might be easily summed up and made available in statistics. We hope this omission will soon be corrected.

AMERICAN MEDICAL ASSOCIATION.

THIRD DAY—MAY 8.

The Association was called to order at 9 A. M. by the President, after which, the announcement of the members of the Committee to memorialize Congress on the publication of the surgical history of the war, was made.

Dr. C. C. Cox, of the Committee on Necrology, reported progress, and on motion of Dr. Hibbard, permission was given the reporter to send the report when ready to the Committee on Publication.

THE DEATH OF PROFESSOR JOSEPH M. SMITH, OF NEW YORK.

Dr. Alfred C. Post offered the following, which was unanimously adopted:

"*Resolved*, That the Association has heard with sincere regret of the death of its late distinguished member, Joseph M. Smith, of New York.

"*Resolved*, That we cherish his memory as that of a learned and skilful cultivator of medical science, an able and successful teacher and writer, an upright and honorable man, and a patriotic and public-spirited citizen.

"*Resolved*, That the Secretary communicate to the family of the deceased, an expression of our sympathy with them in their bereavement.'

Dr. C. A. Lee arose to speak to these resolutions, which he did with much feeling. He hardly thought that it was necessary to say anything in regard to the life or character of such an excellent and well-beloved man, but as he had been intimately acquainted with him for over thirty years, he did not think it out of place for him to say a few words. After referring in an appropriate manner to his acquaintance with the deceased, he remarked "that a more pure, upright, and conscientious man I never knew, particularly with reference to his intercourse with medical men. When I think of the great loss we have sustained in him, I am at a loss to express myself."

Dr. J. S. King, of Natchez, Miss., forwarded a communication to the Association, stating that he was engaged in the compilation of the mortuary and similar statistics of the principal cities and towns of the country, and requesting that physicians would transmit to him such information upon those subjects as they could gather in their respective localities.

The Secretary read a communication from the Dubuque (Iowa) Medical Society, requesting the erasure of the name of Dr. Asa Horr.

On motion of Dr. Jewell, the request was granted.

Dr. Maybury, on behalf of the Committee on Publication, to whom

Dr. Toner's resolutions were referred, reported the following as a substitute, which on motion was adopted:

"*Resolved*, That instead of yearly reprinting the list of members of the American Medical Association, the Committee on Publication be instructed to prepare and print with the Transactions, an alphabetical catalogue triennially, containing a complete list of the permanent members, with their names in full, designating their residences, the year of their admission, the offices they may have held in the Association, and in case of death or resignation, the date thereof."

Dr. Maybrury also presented the following, which, on motion, was referred to the Committee on Ethics.

"*Whereas*, Medical organizations, such as National, State, and County Societies, are believed to be absolutely necessary to preserve the honor of the medical profession, and to keep alive social and fraternal feelings among the members thereof, as well as an important means of promoting medical knowledge and elevating the character of the profession, therefore,

"*Resolved*, That it is with sincere regret that we, the members of the Montgomery County Medical Society of Pennsylvania, learn that some honorable members of the Faculties of our medical colleges in Philadelphia and elsewhere, have kept aloof from the County Societies, on which rest both State and National organizations, thus ranging themselves on the side of those whose unprofessional conduct or low standard of medical attainment, or disregard of medical etiquette, prohibits them from membership in those societies.

"*Resolved*, That as graduates of the University of Pennsylvania, Jefferson Medical College and Pennsylvania Medical College, we have a high regard for the teachers of those institutions, and feel that they owe it to the profession and to our Alma Maters to give their hearty support to medical organizations in general, and especially to the County and State Medical Societies.

"*Resolved*, that although Colleges are entitled to representation in the American Medical Association by one or more of their Professors, we are decidedly opposed to any College or any other medical organization being represenred by a Professor who is not a member of a County Society.

"*Resolved*, That the Corresponding Secretary of this Society be instructed to report these proceedings to the Philadelphia County Medical Society, and that our delegate be charged to lay them before the American Medical Association at the coming meeting to be held in Baltimore on the first day of May next, as well as before the Medical Society of the State of Pennsylvania at its next meeting, to be held at Kingston in Luzerne County, on the 13th day of June ensuing."

W. P. Robinson,
Prest. Montgomery Co. Med. Soc., State of Pennsylvania.

E. Smyser,
Corresponding Secretary.

THE REPORT OF COMMITTEE ON ETHICS.—SPECIALTIES IN MEDICINE.

Dr. Worthington Hooker offered the majority report, and in the main took the ground adverse to exclusive specialities. He divided up the subject into exclusive and partial specialties. In reference to exclusive specialism, he maintained that local affections were apt to be unduly estimated, to the exclusion, perhaps of other parts of the system that were of more importance in the production of a particular disease; that diseases cured by a specialty are magnified in their importance; that specialists too frequently undervalue the treatment of diseases by the general practitioner; that there is a temptation to employ undue measures to obtain notoriety; and that he is further tempted to charge unduly large fees. The field of medical practice was so large that the profession was always willing to seek advice from those who had devoted attention to particular subjects; but this should not encourage exclusive specialism. The specialty should be a natural outgrowth from the general practice, and should never be separated from it. If this were so, a full, frank, and free intercourse would be had between the specialists and general practitioners. The means availed of by the specialties to bring this fact before the public should be ordinary, and not extraordinary. There should be neither advertisements nor puffs in the newspapers. The professor in a school has been chosen for it by those who are competent to discuss his merits for that position, if he were by himself to place before the public the fact that he is skilled in the branch taught by him, he would come under this censure.

The report was well drawn up, and claimed the undivided attention of the members.

Dr. Kennedy, of New York, followed with a minority report, stating that he would read it in the absence of the writer. The writer believes that the whole tendency in every department of science is towards specialties. Science has been advanced during the last century by this course. Recently this tendency has shown in the persons of certain practitioners who resign all general practice, and confine themselves to the specific department they have chosen. No association can object to the advertisement in such cases, unless it is of a mountebank character. The report was signed by H. J. Bowditch.

The subject was then discussed by Drs. H. R. Storer, of Boston, Worthington Hooker, of New Haven, and others; but the hour of eleven having arrived, Dr. W. Marsden, of Quebec was introduced, and proceeded to address the Convention on the subject of cholera connected with Quarantine.

CHOLERA AND QUARANTINE.

Dr. Marsden, of Quebec, according to previous appointment, made some remarks upon Cholera. He commenced by stating his belief in the communicability of cholera, and the efficiency of a rigid quarantine. He had witnessed the first case that had occurred on the American continent, and since that time had given much attention to the study of the disease. He was now convinced that every case of cholera could be traced to infection, and that the proper soil for the propagation of the disease was to be found in the filth and the neglect of the ordinary precautions. He believed that all clothing from patients suffering from the disease should be destroyed, and thus be prevented from spreading the disease. He believed that isolation would prevent the appearance of the disease in any community, and related an instance in point which had made such a strong impression upon him that he was caused to think first of his plan of quarantine. It seems that a schoolmistress, in a locality where cholera threatened to make its appearance, consulted the doctor on the best course to pursue. He advised her, as soon as the disease should appear, to isolate the school from the rest of the town, by closing her gates and doors. This was done, and not a single case of cholera occurred within the walls. Dr. Marsden next gave the members a detailed account of his system of quarantine. As all of our readers may not be familiar with this plan, we will quote from his printed report which he gave us:

"1. The Cholera Quarantine Station shall be divided into three separate and distinct sections or departments.

"2. Each of these three sections or departments shall be isolated and separated from the others by a *cordon* or portion of neutral ground of not less than one hundred feet wide.

"*a.* One of these sections or departments shall be appropriated to the use of the sick, and shall be the Hospital Department.

"*b.* The next or central section or department shall be devoted to the use of passengers not having had cholera, but from infected vessels.

"*c.* And the third or health section or department shall be appropriated to the use of the healthy, who have been removed from the central department, after having performed quarantine there.

"*A.* In the first section or department there shall be three separate and distinct hospitals, besides a convalescent shed or hospital.

"*a.* The one for confirmed cases of cholera to be called the CHOLERA HOSPITAL.

"*b.* Another for cases of choleric diarhœa, or other premonitory symptoms of cholera, to be called the HOSPITAL FOR CHOLERINE.

"*c.* The third for all other diseases not cholera, or cholerine, but coming from on board infected vessels or vessels having had cases of cholera on board, to be called the GENERAL HOSPITAL.

"*B.* The next or central section or department, shall be the primary quarantine department and shall be appropriated to all persons who are not sick, but come from vessels having had cholera on board, and wherein every case on landing shall undergo inspection, washing, cleansing, and purifying both of persons and personal effects. There a quarantine of four days shall be performed, at the end of which period of time all such persons as continue in sound health shall be removed to the Final Quarantine Department, and any that may fall sick or be threatened with sickness during the four days of probation, shall as soon as detected, be removed to the proper hospital, in the Hospital Department. There also the healthy inmates shall be removed daily to a new locality, thus occupying four different habitations during their sojourn.

"*C.* The third, or healthy department, shall be the Final Department, and shall be for all cases coming from the Primary Quarantine Department, after having been cleansed, washed, and disinfected, and after having undergone the *four days'* quarantine; and here a further quarantine of *six days* shall be performed (excepting cases coming from the convalescent hospital or shed, hereinafter provided for,) making in all *ten days* of quarantine, when all persons continuing healthy shall be discharged from quarantine, and be removed from the station. If any premonitory symptoms or other cases of sickness occur in this department during the six days of quarantine, they shall, as soon as discovered, be removed to the proper hospital, in the Hospital Department.

"No communication shall take place with the Hospital Department, except through the central or primary Quarantine Department, for which purpose a passage, unfrequented by the persons undergoing quarantine, shall be set apart and reserved."

Dr. Lee moved the thanks of the Association to Dr. Marsden for his interesting and practical address, and the request of the body that he furnish it with a digest of his communication.

Dr. Bond amended, that those papers accompanying the lecture be commended to the city authorities, and the authorities having such matters in charge throughout the country, for their action.

Dr. Jewell thought the matter should be further investigated, and moved its reference to the Section on Hygiene, to meet afternoon.

The special business of the day was suspended to allow the Committee on Nominations to report.

THE OFFICERS FOR 1866–7.

President—H. F. Askew, Delaware.

Vice-Presidents—W. K. Bowling, Tennessee; J. C. Hughes, Iowa; H. J. Bowditch, Massachusetts; Thos. C. Brinsmade, New York.

Permanent Secretary—William B. Atkinson, Pennsylvania.

Treasurer—Casper Wistar, Pennsylvania.

Assistant Secretary—W. W. Dawson, Cincinnati.

Committee on Medical Education—Drs. T. D. Gross, D. F. Condie, John Bell, H. J. Bigelow, Charles A. Pope.

Committee of Arrangements—Drs. John A. Murphy, James Graham, R. R. McIlvaine, J. P. Walker Uunsicker, William T. Brown, William B. Done, Cincinnati.

Committee on Prize Essays—Drs. Francis Donelson, Maryland; Simpson, U. S. A.; C. C. Cox, Warren, Van Bibber.

Committee on Publication—Continued.

Committee on Medical Literature—Drs. A. C. Post, Jas. Anderson, H. D. Noyes, T. G. Thomas, Stephen Smith, all of New York.

Committee on American Medical Necrology—Dr. Wood Delaware, substituted for Dr. Cooper; Jno. L. Callender, in place of Dr. Bowling; Jno. Blaine, in place of Wm. Pearson. The following were added: Drs. R. D. Arnold, Georgia; Lopez, Alabama; G. Dowell, Texas.

Committee on Climatology—H. Jones, in place of C. L. Allen, Vermont. The following were added to the Committee: Drs. U. Harris, Georgia; G. Engelman, Missouri; R. Miller, Alabama; Fenner, Louisiana; G. Dowell, Texas.

All special committees are to be selected by the sections to which the subjects relate.

THE NEXT PLACE OF MEETING.

The place recommended for the next annual meeting of the Convention is Cincinnati, Ohio, on the first Tuesday in May.

On motion of Dr. Ordway, of Boston, the report of the committee was adopted.

On motion, the Association went into a committee of the whole to discuss the resolution offered by Dr. Hibbard, having reference to extending the time for the course of study in the different medical colleges.

The whole matter was earnestly discussed by Drs. D. H. Storrer, Worthington Hooker, Wright, of Ohio, Davis, of Ill, and others, and resulted in the passage of the following resolution, offered by the last gentleman:

"*Resolved*, That the Association most earnestly request the medical colleges of the country to hold a convention for thoroughly revising the whole system of medical college instruction for the purpose of establishing more uniformity of time, and a more systematic course of instruction for the whole.

The report of the Committee of the Whole was adopted, and a committee consisting of Drs. Davis, W. Hooker, S. D. Gross, Wright, and Shattuck, was appointed.

Dr. C. C. Cox read the report "On Rank in the Army," which was referred to the Committee on Publication.

Dr. Cox then offered the following, which was adopted:

"*Resolved*, That the President of this Association bring before the notice of the Military Committees of both Houses of Congress, at as early a period as possible, the present status of medical men in the military service of the U. S., and urge upon them that in the army medical bills, under consideration of Congress, the interests of the medical profession shall be so regarded that the medical staff in the service shall, numerically considered, receive the same rank and command as officers in other staffs of the army are justly entitled to."

The committee appointed to act on the foregoing resolution were Drs. D. H. Storer, C. C. Cox, Antisell, Johnson, and Allen.

On motion of Dr. Cox, the following members, by invitation, were elected: W. D. Stewart, Va.; W. S. Forward, H. W. Stump, and J. L. Chaplain.

A Committee was appointed on the subject of Fracture of the Spine, of which Dr. Brown-Sequard was made Chairman.

On motion, Drs. Post, Antisell, and Atlee were added to complete the Committee on Medical Ethics.

SPECIALITIES AGAIN.

On motion, the report of the Committee on Ethics, which had been laid on the table, was called up.

On motion of Dr. Toner, the resolution attached to the minority report was omitted, and the reports were both adopted.

A motion to reconsider next prevailed, and the resolution was added to the minority report referred as before.

Dr. Homberger, of N. Y., made a request to offer a personal explanation, which, after considerable discussion, confusion, and sensational speaking, was granted.

On motion of Dr. Sayre it was agreed to hold an adjourned meeting at 5 P. M., to discuss the subject of cholera.

A communication from Dr. McGee, "On Periosteal Flap Amputations," and one from Dr. Elsberg, N. Y., "On Diagnosis of Diseases of the Larynx," received, and both referred to the Section on Surgery.

The meeting then adjourned until 5 P. M.

THIRD DAY—AFTERNOON SESSION, MAY 4.

At five P. M., according to previous adjournment, the Association met, and after being called to order, resolved itself into a Committee of the Whole, choosing Dr. Davis as chairman.

The subject for discussion, as previously announced, was

CHOLERA.

Dr. Sayre, of New York, opened the discussion. He considered that the disease could not reach here unless it was brought here; that it could not be generated here. It multiplies its ravages when filth and uncleanliness abound, and is generated in a sandy, level country, beneath a temperature of 128 degrees. There the decomposing animal and vegetable substances originate this peculiar poison. He believed that it accompanied the individual, and that it did not travel by atmospheric power. He thought that the government was responsible for permitting the disease to get into the land. A rigid, proper quarantine, universally adopted by the General Government, in combination with the British Provinces, would, in his opinion, prevent its admission to our continent. We had no quarantine, rightly considered. The disease in 1849 did not originate in Baxter street, New York, but took its origin from an infected person who escaped from quarantine. The cabin passengers escape because the disease has not traveled 200 feet nor ten feet from the steerage to the cabin. He remarked that he did not believe in mysteries, but wished to understand facts in his own way. If the valuable information that he had obtained from Dr. Marsden were put into practical application by the General Government he believed that millions of money and millions of lives would be saved.

Dr. Linton protested against the doctrines advanced that morning and evening. We had medical journals through which we could discuss this subject a long time before the cholera would get here, and a long time before quarantine could prevent its getting here. "Who can believe that cholera could have been prevented from coming here in 1849? I do not believe it is any more contagious than intermittent fever. I am certain that nine-tenths of the physicians of this country are convinced of this fact. I say to the citizens of New York, Baltimore, and Canada, you may have no fears of the cholera. If it comes it will arise in your midst. Cholera is not a disease (!!) He did not believe that there was any truth in the doctrine of contagion. "Cholera breaks out in ships after they are six weeks at sea. I saw a case in St. Louis two months ago. Where did the Asiatics get it from?"

Dr. Bell, of Brooklyn, thought the facts of Dr. Marsden inconsistent with the results of observation. Dr. M. had traced it first from a brig in Liverpool. He did not say that cholera existed in Liverpool at the time. Dr. B. believed cholera can be traced to various places other than Asia. "If cholera is contagious, it takes various roundabout ways of making short journeys. It took an exceedingly roundabout way to the principal cities of Europe. Of the present epidemic, it is said the Mecca pilgrims first had cholera. The evidences I have collected are against strict quarantine. The passengers of the Atalanta were detained at quarantine; no cases occurred among the well passengers after they left the ship. Of all the things likely to originate cholera, none are equal to a crowded, filthy ship. None of the passengers or things of the Atalanta were taken to Ward's Hospital. I would protest against the endorsement of any restrictions against persons advised by Dr. Marsden. The detention of well persons can never protect us against any disease. Our protection is in our clean houses, for cholera often leaps over healthy residences. The action of the health officers at the New York quarantine has been fatal to well persons, and has tended to ward off investigation of the places where cholera originated."

Dr. John L. Atlee, of Pa., said that it was difficult to know the facts in large commercial cities. "There are a thousand avenues to such cities as New York and Boston; but in the inland districts we are more likely to reach a better observation of facts. In 1832 I was in the midst of cholera at Lancaster County Hospital, Pennsylvania. I believed that cholera and yellow fever were diseases independent of any idiomiasmatic condition of the atmosphere. In July or August, 1854, a certain peculiar condition of the air existed. The water of the Susquehanna was very low, and the water of the basin very filthy, yet there was no cholera. There were, however, some cases of bilious and intermittent fever. One day a car of emigrants came from Philadelphia to Columbia; two or three of the passengers were ill, and were put upon the platform. Four gentlemen seeing them there at the point of death, conveyed them to a shed. In the next twenty-four or forty-eight hours not one of them was living. In two or three days the cholera prevailed in Columbia. In the Lancaster County Hospital the winds were from the south. We had no cholera. A few days after the cholera broke out in Columbia, an emigrant reached there afflicted with cholerine. Shortly after two or three cases of cholera existed. The same train conveyed the cholera to Pittsburg. Passengers came to the vicinity of Lancaster at a place called Paradise. Their effects were sent to Lancaster in a high healthy and location. The relative who washed the clothes died of cholera. It is a contagious disease- Why did it not spread? Why did not small-pox spread? There is an atmospheric constitution favorable to the development of disease. The result of observations in Sweden was that it had been conveyed there by the clothes of sailors. I think Dr. Marsden is right and Dr. Sayre is right, and our friends in Philadelphia must come to the same conclusion if they wish to preserve that metropolis from the ravages of the cholera."

Dr. Sayre said the quarantine law of New York, as now enforced, is a disgrace to civilization. Dr. Carnochan, himself, and others saw the cases on Ward's Island, and they all came to the conclusion that they were not cases of cholera.

Dr. Bell remarked that Dr. Geo. Ford insisted that the Ward's Island cases he treated were those of cholera.

Dr. Sayre then quoted from Dr. Ford's official statement in the annual report of the Commissioners of Emigration, in which he (Dr. F.) stated on page 52, that those "twenty-seven deaths were caused by *diarrhœa* and dysentery." This was the *official* statement of Dr. Ford.

Dr. Marsden said that cholera followed human travel. He adduced other facts to demonstrate its contagious character. It is infectious in person and personal effects. He urged the necessity of guarding against any communication between the infected and the well. Equanimity, cleanliness, and temperance were three great adjuncts to the quarantine.

Dr. Jewell, of Pa., said: "I have been charged with disseminating cholera. I have done all I could to prevent its entrance to Philadelphia. Cleanliness and ventilation will do much to that end. We have been engaged at that during the past winter. I do not believe in quarantining healthy people. That would be disseminating the disease by giving it to the well persons on vessels where cholera existed. We had the epidemic in the summer of 1849 in Philadelphia. It began in four different portions of the city. The first case was at Richmond, the second at Eighth and Spring Garden streets, the third in Moyamensing. These were all in the centre of the city, except at Richmond, and remote from the Delaware. The fifth produced the disease in Richmond and along the Delaware. In 1832 the first case was on the Schuylkill, in a canal boat that came down from the upland country. There had been no foreign arrival in Philadelphia. It came from a poisoned atmosphere. In 1849 no flies were living. In Wheeling the birds died. The doctrine of contagion is dangerous, and will deprive the sick of assistance. Small-pox does spread, and if we had not vaccination it would spread more than it does, Contagion and infection are distinct. Contagion is the principle communicating the disease from one person to another. It is not so with cholera. There were no cases of contagion in 1832 or 1849. No vessels arrived with cholera on board. They may have arrived after the disease appeared. I am sorry the resolution was introduced Next year we will be better able to test the value of Dr. Marsden's information. The poison of cholera will increase rapidly by contact with filth. It is only by purification of the city that cholera can be prevented."

Dr. Lee followed with some brief remarks sustaining the views of Dr. Marsden, and maintaining that it was contagious under certain circumstances. Certain neighborhoods of a very filthy character were not attacked until emigrants came there.

The Committee of the Whole rose, and the Association adjourned without further action.

THIRD EVENING, MAY 3—ENTERTAINMENT BY THE CORPORATE AUTHORITIES.

The corporate authorities of the city gave an entertainment to the members this evening, at which were present all the notabilities of the city, including the principal officers and members of the City Councils. The entertainment was prepared in the most generous and munificent manner, and reflected infinite credit on the donors. Between four and five hundred gentlemen were present. The supper was called at nine o'clock. A band of music, stationed in the gallery, initiated the occasion with an appropriate air, and at intervals in the course of the evening performed all the national hymns and songs. After discussing the substantials of the bill of fare, the customary toasts were given by Dr. J. F. Moore, toast-master, and suitably and eloquently responded to by gentlemen of the municipal government of the city, and the officers and members of the Association, the attention and laudations of the great assemblage being specially directed to the eloquent response made by Dr. N. Pinckney to the toast, "The navy of the United States and its medical corps." Other toasts were equally well received. and the interest of the supper was sustained until a late hour in the evening.

FOURTH DAY—MAY 4.

The Association was called to order at the appointed time, 9 A. M., by the President. After which, the Minutes of the previous sessions were read by the Permanent Secretary, Dr. W. B. Atkinson, of Philadelphia.

Dr. Cox was, on motion, accredited as a delegate to the Foreign Societies.

Dr. Garrish, of N. York, offered the following, which was adopted:

"*Resolved*, That all the members of this Association urge upon the Legislatures of the various States the great importance of making it compulsory that all marriages, births, and deaths be registered.

MEDICAL RANK IN THE NAVY.

The Naval Committee appointed at the last meeting of the National Medical Association having failed to report upon the subject of naval medical rank, it was moved by Dr. Cox that Surgeons Wm. M. Wood, Ninian Pinckney, and David Harlan, U. S. N., be appointed a committee to report upon this subject at the next meeting of the Association. Adopted.

Various amendments were next brought up and laid upon the table.

The reports of the various sections were then in turn called for, and adopted. They will be found in another place under appropriate headings.

Dr. Holton, of Vt., offered the following, which was unanimously adopted:

"*Whereas*, The author of the Essay, Dr H. R. Storer, to whom the prize of $100 from this Association was awarded in 1865, refused to receive the amount thus awarded, consequently increasing the resources of the Association to that amount; therefore,

"*Resolved*, That the thanks of this Association are hereby tendered to Dr. H. R. Storer for this display of liberality"

The Committee on Ethics, appointed to report on the resolutions of the Montgomery Medical Society, recommended a reference of the whole matter to the Medical Society of that State.

Dr. Holton offered the following, which was lost:

"*Resolved*, That at the future meetings of this Association there shall be held two general sessions, one in the morning and one in the evening, unless otherwise ordered."

Dr. King, of Pittsburgh, offered the following:

"*Resolved*, That this Association, approving of the system of quarantine proposed by Dr. Marsden, of Canada, as the most effectual means for preventing the introduction of cholera into this country, do earnestly recommend the propriety of its adoption at all our ports of entry, to the favorable consideration of Congress."

The House then, on motion, after a little discussion, went into a Committee of the Whole, Dr. Davis being Chairman.

Dr. Bell, of Brooklyn, was granted the privilege of making a personal explanation of his statements in reference to cases of cholera on Ward's Island, and although he persisted in his original assertion, the Chair declared that the whole matter was, he presumed, well understood by the Association, there being only a different scientific opinion entertained by two different parties.

The resolution of Dr. King was then taken up, and after much discussion, Dr. J. H. Burge, of Brooklyn, offered the following, which, after eliciting many remarks from Drs. Horton, Storer, Post, Lee, Pinckney, (U. S. N.), Marsden, and Dr. J. Anderson (N. Y.), was on motion laid on the table. The following is the resolution:

"*Resolved*, That this Association appoint a Committee of ten to memorialize Congress to the following effect: That, whereas, in the opinion of many eminent physicians, the system of quarantine recommended by Dr. Marsden, of Canada, for protecting our country from Asiatic cholera, would prove effective: therefore, *Resolved*, that we earnestly petition the government of the United States to make an immediate and ample appropriation, and take all other necessary measures to test the utility of said system."

The Committee of the Whole rose and reported accordingly.

The President resumed his seat.

Dr. Cox moved that Dr. J. C. Tucker, Nevada, be a member by invitation. Adopted.

Dr. Stokes offered the following as the report of the section on Psychology, which was accepted and referred:

"The section on Psychology unite in requesting that a committee be appointed to make a report at the next annual meeting on Insanity, and ask that Dr. J. Ray, of Providence, R. I.; Clement C. Walker, Massachusetts; A. B. Cabaniss, Mississippi; W. S. Chiply, Kentucky; John Fonerdin, Maryland, be appointed said Committee.

CLEMENT C. WALKER, *Chairman.*
WM. H. STOKES, *Secretary.*

The report of the Committee of the Whole in reference to the question of quarantine was then adopted by the Association.

DEATH OF PROF. D. L. MAGUGIN, OF IOWA..

Dr. Taylor, of Iowa, presented the following:

"*Whereas*, After a long and laborious life devoted to the practice of medical art and promotion of the interests of medical science, Dr. D. L. Magugin, of Iowa, has been called to the final rest of all good men:

Resolved, That the Association, while deeply regretting the loss they have sustained, will ever keep alive the memory of his many virtues and professional worth, and commend the example of his untiring devotion to our common cause.

Resolved, That a copy of these resolutions be furnished his family with sincere condolence."

Dr. Garrish, of New York:

Resolved, That the members of this association tender their heartfelt thanks to our professional brethren of Baltimore for the liberal, cordial and satisfactory manner in which they have entertained us."

Dr. H. R. Storer offered his report as Delegate to the last meeting of Superintendents of American Institutions for the Insane, and presented the following for adoption:

"*Resolved*, That the Association recommend to the several medical and law schools of the country, the establishment of an independant chair of Medical Jurisprudence, to be filled if possible by teachers who have studied both law and medicine; attendance upon one full course of lectures from whom shall be deemed necessary before the medical degree is conferred.

"*Resolved*, That while this Association regrets that the Association of Superintendents of American Assylums for the Insane has not yet thought fit to unite itself more closely with the representative body of American physicians, it still is of opinion that such union is for their mutual and reciprocal advantage, and that it ought to be effected without further delay."

On motion the above was adopted.

After the transaction of business of minor importance, the Association adjourned *sine die*.

THE MEETINGS OF THE SECTIONS.

SECTION ON PRACTICAL MEDICINE AND OBSTETRICS.

DISCUSSION ON DIPHTHERIA.

The section was organized by the appointment of Dr. Lake J. Tefet, of New York, Chairman and Dr. W. B. Bibbins, of New York Secretary.

Dr. H. D Holton, of Putney, Vermont, Chairman of the Committee on Diphtheria, as it prevailed in the United States, made a report by reading an elaborate and interesting paper. He gave a history of the disease from its first appearance in this country, more than a century since. He insisted that diphtheria should not be confounded with follicular tonsilitics and kindred affections; in fact, nothing should be dignified with the name that did not present the characteristic exudation, with swelling of the cervical glands, etc. Neither should it be confounded with scarlatina or croup. Tables were presented showing the fatal months, the proportion of deaths at various ages of the three diseases. The disease was divided into diphtheria simplex, diphtheria maligna or gangrenosa, and tracheal diphtheria. He entered at some length into the discussion of the sequelæ, stating that they were paralysis, rheumatism, and general cachexia.

After discussing the various plans of threatment, he divided it into local and general. Such mild cathartics should be used as the case seemed to require, although nothing like active purgation should be indulged in. Chlorate potassa should be given pulverized with an equal amount of sugar, a little placed in the mouth, and allowed to run down the throat, that the local as well as the constitutional effect might be obtained.

Suph. quinin. and tr. ferri chloridi should be used as occasion required; also alcoholic liquors, either alone or combined with cinchona bark; wine whey, milk punch, and beef tea were to be used to support the patient when a nourishing diet could not be taken.

The local application should be such as would prevent the absorption of fluid portions of the exudation. For this purpose persulphatum ferri was recommended; also the following: R. Tr. ferri chloridi, chlorat. potassæ *aa* dr. j; glycerine pure, dr. ij. Misce. Either of these to be carefully applied with a soft brush. Externally, an infusion of hops in ley of wood ashes would be found the best for any hot fomentation.

The following deductions were made: 1st. That diphtheria has occurred as an epidemic from time to time from the first settlement of this country; 2d. That it is a distinct disease, on no account to be confounded with scarlatina or croup; 3d. That it is particularly a disease of childhood, although it exempts no age; 4th. That it is communicable to that degree that it is the duty of every physician to separate the infected from those that are well, particularly in children; 5th. That it is a disease primarily affecting the blood, consequently the treatment to be effective must be not local but general, and of such a nature as to eradicate or neutralize the poison; such local treatment should, however, be used as will prevent the absorption of fluid portions of the exudation; 6th. That when the exudation has invaded the trachea, the only hope of saving the patient is in tracheotomy,

On motion of Dr. Ellsworth Eliot, of New York, the report was referred to the Committee on Publication.

Dr. King wished to take exception to the remark made in this paper that when the membrane is thrown off from the trachea the patient will almost always get well. He had seen two cases, one a man and the other a child, in which the membrane had been thrown off and both died. He could not believe that the cast-off membranes were ever re-absorbed. He stated that he had ceased to use local applications for anything more than their antiseptic effects; and for this purpose he thought that the solution of common salt was as good as anything else.

Dr. Gallagher, of Pitsburg, Pa., expressed himself much pleased with the report. He regretted, however, that the author had made no reference to the use of alum as a local application. He had used that remedy with the happiest effects, and had more confidence in it than all the others. He had used also with great satisfaction the ordinary "hard cider," with a view of assisting the elimination of the morbid materials by the kidneys.

Dr. Worthington Hooker, of New Haven stated that there was a great tendency in the profession to run into extremes in reference to treatment. He was not disposed to think that any disease could be successfully treated by following any one plan to the exclusion of others. The really rational plan was to follow all the indications in the particular case as they might arise. There are many marked distinctions between croup and diphtheria, but he chose only to refer to the want of that severe constitutional disturbance in the former which is never absent in the latter disease.

Dr. McCollum, of Vermont, stated he had seen 200 cases of the disease in his county within the last five years. He had seen three or four cases recover after the membrane had been cast off. He had never used gargles except as disinfectants. As regards ice, he had noticed benefits from its use in a great many cases. He had also been in the habit of allowing his patients to inhale the vapor of acetic acid with marked benefit.

Dr. Gross, of Pitsburgh, stated that he had had a large experience in the treatment of diphtheria in his district, and had come to the conclusion that the best means of treatment consisted, first in the use of calomel as an antiphlogistic, followed by the very free use of chlorate of potash. He had seen 400 or 500 cases of the disease since he instituted this plan of treatment, but had not met with a single fatal case. He also in conjunction with the foregoing remedies, made use of the solution of nitrate of silver (20 grs to the ounce) as a local application, as well as saturated solutions of alum and lemon-juice on crushed ice.

Dr. Bibbins, of N. Y., stated that some time since the question was asked him by Prof. A. Clark—What was the number of cases of diphtheria which he had met with in his dispensary practice? Dr. Bibbins, before he was prepared to answer such a question, wished to know from Dr. Clarke what he understood to be true diphtheria—wether the essential symptoms of the disease were considered to be adenitis, false membrane, fever, and depression of the vital powers. "Of course," replied Dr. Clarke. Dr. A. Jacobi, who had studied this subject very thoroughly, has published the fact that these symptoms are always essential to the disease. A certain proportion of cases must be distributed to each individual; and such being the fact, he could not but believe that when gentlemen report such a large number of cases as occurring in their practice they do not take into account the necessary symptoms of diphtheria; that a great many report cases which they call diphtheria, which other practitioners are not willing to admit as such. He remarked that the average mortality of true cases of diphtheria among dispensary patients was thirty-three per cent., and did not suppose that under any treatment this mortality could be much decreased. Dr. A. Clark had reported the same rate of mortality. Dr. Bibbins was led to believe, from the cases which he had met with, that the tonic and supporting plan of treatment was the only reliable one.

Dr. Shumway, of N. Y., had used with great benefit, as local applications, the nitrate of silver stick, the chlorate of potash, and the chlorate of ammonia. He apprehended that the great difficulty with many patients that were convalescent was not that they did not get medicine enough, but that there was paralysis of the throat which preventnd them from swallowing them. In those cases he had used nutritive injections into the stomach with very good results.

Dr. Davis, of Ill., spoke in this connection of blood-poisoning in many diseases, diphtheria among the rest. He thought that there was yet a great deal to be learned with reference to the true pathology of these so-called blood diseases. The query had arisen with him whether diphtheria really depended primarily upon a poison in the blood, or whether the altered condition of the blood itself, instead of being primary, was itself a secondary consequence of a prior change in the properties of the organized tissues of the human body. He discussed this question at considerable length, showing the probability that there might be such a fundamental error in nutrition, as that assimilation or dissimilation was so interfered with that the blood was poisoned in consequence.

Dr. Hewitt remarked that he had great faith in the solvent power of both alum and chlorate of potash on the diphtheritic membrane. He had taken pieces of the membrane that had been separated, and had dissolved them entirely in solutions of these salts. His treatment was to take a glass tube, pass it back into the fauces, and inject one or other of the solutions directly against the affected parts.

Dr. McIntyre, of Concord, N. H., was of the opinion that if there was any error in nutrition, it was secondary to the formation of the membrane in the throat, which by obstruction to the respiration interfered with the proper oxidation of the blood. This he considered to be the starting-point of the constitutional trouble. For the purpose of aiding the system in the elimination of the poison in the latter stages of the disease he had used colchicum seed, guaiac, and nitrate of potash, with much satisfaction.

Dr. Taylor, of Iowa, did not think that there was any good to be attained by suggesting this and that remedy for a disease which had existed in every section of the country; for different remedies must be used in different localities, and he thought the best guide for any general plan of treatment was to be found in a proper, thorough, and enlightened view of the pathology of the disease.

The meeting then adjourned.

SECOND SESSION.

Dr. Lake J. Tefet in the Chair.

The second meeting of the Section was held at the Dental College, corner

of Hanover and Lombard streets, on Wednesday, May 2, 1866, at 3:45 P. M.

The minutes of the last meeting were read and approved.

Dr. Jas. J. Levick, of Philadelphia, read the "Report of the Special Committee on Spotted Fever."

On motion of Dr. Henry D. Holton, of Putney, Vt. the report was referred to the Committee on Publication, with a recommendation for its publication in the transactions of the Association.

INHALATION OF NEBULIZED FLUIDS.

Dr. J. Solis Cohen, of Philadelphia, read a paper entitled "Remarks on the Inhalation of Nebulized Liquids, and their Topical Application to Inflamed and Ulcerated Surfaces."

The reader stated that his design was not so much to present a review of the knowledge of the profession on these topics, or to bring forward any of his peculiar views, as much as to give a resume of the results thus far obtained from recent experience, with a view of eliciting upon a subsequent occasion a valuable paper on the whole subject of the Therapeutics of Inhalation, which should embody the experience of a number of observers, and furnish the profession with authoritative data for their general investigation, inasmuch as the literature on this subject, especially in this country, was very meagre and unsatisfactory.

The paper stated that the idea of treating diseases of the respiratory organs by inhalation, which should bring remedies directly in contact with diseased surfaces, was as old as the healing art itself; for what was more natural than to imitate the entrance of the vivifying breath of life in its access to the economy? The records of classic Greece and Rome show that this principle was taken advantage of in the inhalation of volatile substances, and in the residence of patients upon the seashore, and in the neighborhood of volcanoes. This method of treatment fell into disuse, and was again resorted to many times, and had fallen into permanent neglect for a long period, until the discoveries of oxygen leading to further chemical research, and the promulgation of the exhilerating effects following inhalation of the nitrous oxide gas, again directed attention to the subject of inhalation as a remedial agent. Then the ammoniacal exhalations from cattle yards, stables, etc., became largely employed in many affections, until too extended empirical application to all the ills of life meeting with failure, led the whole system into disuse, even for these affections for which it was originally intended. The discoveries of the properties of chlorine, iodine, etc., of the effects of the smoking of opium among the Chinese, led to the employment of similar substances; and the whole series of narcotics, resins, and all substances producing vapor became employed in this manner.

Observations of the diseases effecting workers in minerals, metals, etc., and the post-mortem revelations of the scalpel, proving the entrance of particles of dust into the lungs, led to the therapeutic employment of powders by inhalation.

After some other general remarks of a similar nature, the paper went on to relate that within a few years a new method of presenting *liquid substances* for inhalation *as such*, had become much employed in Europe, and seemed to promise an extensive field of success in the treatment of the whole class of pectoral troubles.

Every one is familiar with the effect of a stream of water, directed upon the side of a house, how a large portion of the volume of water is directed back in a shower of small streams or coarse spray. In certain bathing establishments in Germany, many liquid applications are made on this principle to the surface of the body in the treatment of affections of special organs, and the general system likewise. Streams of the medicated liquid are forced against metalic plates on the walls of the bathing apartments, and fall over the desired surfaces in this shower or coarse spray.

It having been noticed that amelioration of concomitant chest affections seemed to follow this exposure for other purposes, patients were sent to these establishments to respire the air thus impregnated. The beneficial results obtained at the Inhalatorium of Dr. Auphan. of Eux-les-Bains, established in 1849, led to similar establishments elsewhere, until finally, Sales-Girons, who in connection with Flube, had in 1856 erected an inhalatorium at Pierre-fonds, conceived the idea of constructing on this principle a portable apparatus which could be employed by patients at their residences, and thus admit of much wider application. Sales-Girons exhibited an instrument of this kind to the Academy in 1858. His apparatus consisted of a condensing syringe, which forced a very fine stream of liquid against a convex metalic button, converting it in deflection into a very finely divided spray, having much the appearance of a dense fog or mist, the seperate particles of which, suspended as they are for a time in the atmosphere, playing around much like the dust observed in a sunbeam, can be drawn into the lungs by inspiration.

The paper referred to several of these apparatus, especially the modification of the tubes of Bergson, and the employment of steam by Siegle, in lieu of the compressed air, and stated that experiments upon living animals proved the entrance of these particles into the air-cells ; though for various reasons, the spray striking against many surfaces during its ingress, its dissipation into a much larger volume than could be received into the mouth, etc., but a small quantity of the liquid thus nebulized (the writer thought not more than twelve per cent), could reach the smaller bronchical ramifications.

The writer thought that the application in this manner of liquid substances of known strength directly to the diseased surfaces would prove more prompt in effect, whether for good or ill, than when the entire current of the circulation became the vehicle of communication, perhaps affecting the general system when not desirable. The mucous membrance of the lungs is quick to absorb, secretes no chemical product to modify chemical medicines, and has no temporary ingesta to interfere with the direct action of remedial agents applied to it.

Although the results thus far obtained are far from being positive, and many of them are unsatisfactory and negative, still they are such as to justify careful research into this new method of medication.

Some conclusions were then given as the results of recorded experience; the results of the writer's personal experience and observations, and the results of extensive experiments, carefully conducted by Dr. J. M. Da Costa, at the Pennsylvania Hospital, as well as those obtained by the latter named gentleman in his private practice.

A few remarks followed as to the manner of preparing medicines for employment in this way, and their application when different parts of the air-passages were to be medicated.

Allusion was made to the employment of this system of nebulization for local applications to inflamed and ulcerated surfaces on the exterior of the body, and a certain distance within the various cavities, and an instrument devised for this purpose was exhibited, to demonstrate that in a second or two a layer of a caustic or other solution, many times more delicate than any film which could be deposited by the slightest touch of a hair pencil, could be directed upon an ulcerated or inflamed surface, whether of large or small surface. A continuous application of course can be kept up when desired, and in this connexion the method was recommended for the production of local anæsthesia for minor operations in surgery—a subject at present exciting a good deal of attention and brought to the notice of the profession by Dr. B. W. Richardson, of London.

On motion the paper was referred to the Committee on Publication, for publication in the Transactions of the year; but at the request of the writer the motion was modified to call for the appointment of a special committee to report on the "Therapeutics of Inhalation" at the next annual meeting of the Association.

On motion, the paper was received.

Dr. J. E. Clawson, of Delaware, moved that the Section appoint a Special Committee on the Therapeutics of Inhalation, to consist of three members, and that the paper of Dr. J. S. Cohen, just read, be referred to that Committee. Carried.

The Chairman appointed as such Committee:

Drs. J. Solis Cohen, Philadelphia; Dr. J. M. Da Costa, Philadelphia; Dr. L. Elseberg, New York.

Adjourned.

THIRD SESSION.

The Section met at the Concordia Hall, on Thursday, May 3, 1866, at 1:45 P. M.

In the absence of the Chairman, Dr. Elsworth Eliot, of New York, was elected Chairman *pro tem.*

The minutes of the last meeting having been read and approved, the section adjourned *sine die.*

SECTION ON MEDICAL JURISPRUDENCE, PHYSIOLOGY, AND HYGIENE.

FIRST SESSION MAY, 1, 1866.

The session was organized at Concordia Hall, 8 P. M., May 1, by electing Dr. Wilson Jewell, of Pennsylvania, Chairman, and Dr. A. N. Bell, of N. Y., Secretary.

REPORT ON DISINFECTANTS.

The first paper called up was the Report on Disinfectants, which was read by Dr. E. M. Hunt, of New Jersey, chairman of the Committee. On motion to refer it to the Committee on Publication, it was brought under discussion by Dr. T. Antisell, who, though he considered the report in many respects an able one, did not regard it sufficiently elaborate, particularly in special utility of dry heat for the destruction of funguous organisms resulting from the exposed excreta of persons sick of the cholera. While he regarded the most scrupulous cleanliness and care in the removal as speedily as possible, of all accumulations of whatever kind from such persons; yet he thought that here disinfectants had their chief application, and that if means could be devised for the thorough application of heat to all such accumulations, the poisonous quality for the diffusion of the epidemic would be destroyed. Of ozone and other disinfectants dwelt upon by the committee, he thought them of much less importance: and that they occupied too large a space in the report, to the exclusion of that which he considered so much more useful

Drs. Green, C. A. Lee, E. R. Squibb, Jas. Hibberd, took issue with Dr. Antisell as to the province of the committee in the report, regarding it in the main as sufficiently elaborate, and more strictly in accordance with what reports for the Transactions of the Association should be, than if it went into collateral subjects.

Drs. Hunt and Bell defended the report on the ground that it was necessarily a chief effort on the part of the committee to present a a resume of such facts as had from time to time been brought to notice in the history of disinfectants; and that it would not only be out of the province of the committee, but quite impossible, to report upon the special indications for the application of disinfectants to the various supposed causes of disease, such as the one presented by Dr Antisell.

The motion to refer the paper to the Committee on publication was then put and the paper was so referred.

On motion, it was voted that Dr. Antisell be requested to prepare a paper for the next Session of the Association, *On the Causes of Epidemics.*

INFLUENCE OF ELECTRICITY ON EPIDEMICS.

The next paper taken up was the report of a special committee on the Influence of Electricity on Epidemics, by Dr. Squire Littell, of Philadelphia.

This report was presented to the Section on Hygiene at the last session of the Association, but owing to its length was not all read. It was deferred for the time, and owing to the supposed absence of the author from the country, the paper was omitted from the Transactions. Members of the Section present who had carefully examined the paper, spoke of it in high terms, and as being well worthy of publication in the Transactions. But as it was a long paper, and had already been examined, and in part at least discussed, they did not deem it worth while to again occupy the section with its consideration.

On motion, it was referred to the Committee on Publication. The section then adjourned.

SECOND SESSION, MAY 2—THE USE OF PERMANGANATE OF POTASH.

Dr. B. F. Craig read a paper on the use of permanganate of potash for the purification of water, especially during the prevalence of epidemic cholera.

The points of the paper were presented by Drs. C. A. Lee and E. R. Squibb, namely, that the disinfecting agent in the use of the permanganate of potassa and allied substances—was ozone. According to the remarks of Dr. Squibb, the power of disinfecting substances generally, excepting some, such as charcoal, which are absorbents, can be measured in a certain degree by the facility with which they give out or abstract oxygen. The paper under discussion was defective, in that the author assumed that the organic matter present in nature is the cause of cholera ; and also that he took no note of the deposit of carbonate of potassa that would take place even to a mischievous degree in the use of the remedy. Yet, upon the whole, the paper should be regarded as a contribution to the important subject of disinfectants. It was, on motion, voted to commend it to the Committee on Publication.

COMPULSORY VACCINATION.

Compulsory Vaccination, was presented as a subject of discussion by Dr. A. N. Bell, chairman of the committee on that subject. While he regarded the literature of *vaccination for the profession* exhausted, he considered the field still large for the purposes of the committee, namely, the diffusion of information among the people ; and his chief object in presenting the subject in this manner, instead of by formal report, was to elicit the expression of the Section as to the best means of diffusing information. In the Southern States, especially, a new field was now open for reaching a large number of persons requiring vaccination and revaccination, in order to put a stop to the ravages of small pox, and he hoped that some of the gentlemen present would be able to assist the Committee in devising means for such a purpose.

Dr. Wm. M. Charters, of Georgia, described the terrible ravages of small-pox among the negroes at Savannah on the arrival of General Sherman's army, and attributed it not to any want of a correct appreciation of the utility of vaccination, but to the *imperfect manner* in which vaccination was performed.

It was the practice, to a great extent, to commit this subject to unprofessional persons. In the Southern States, especially, masters and overseers thought themselves equally competent with physicians for so simple an operation. But the result justified the conclusion that the disease they communicated was frequently a *vaccinoid* sore only, and not a vaccine vesicle. The operation was performed more with reference to making a *sore* than anything else, and that was regarded as the prophylactic, but exposure proved to the contrary. In other cases, however, and these were by no means insignificant, vaccination had been well performed and it had taken perfectly, but the susceptibility to it and to small-pox not having been exhausted, the individual was still liable. He therefore advocated exhaustive vaccination to begin with; let the operation be repeated until it ceases to produce an impression, and he believed susceptibility to small-pox would be destroyed for the whole lifetime of the individual. To accomplish this, he believed in the necessity of compulsory laws, requiring every person to be thoroughly vaccinated, under such penalties as would insure compliance.

Drs. Lee and Hibberd referred to the ineffectual State laws on the subject, and also to the no less ineffectual laws of England, and thought that something more was required.

Dr. Nebinger did not believe that such laws could ever be made effectual in this country, and thought the work of the Committee to diffuse information—which, so far as vaccination without danger, or a belief in its prophylactic powers was concerned, was effectual—only now need be pressed to the equal necessity of revaccination. On the necessity of *re*vaccination, he knew there were yet many physicians and a multitude of other people needing information. He cited several cases in illustration. He hoped that the Committee would be continued, and that every member of the Section would do his utmost to press upon the attention of the profession and the public, the facts that had been already presented in the last year's report.

Dr. Toner expected much good to result from registration, a subject that was now attracting much attention; and when it was so far advanced that correct information could be gained as to who was and who was not vaccinated, he thought that one great obstacle would be removed—the necessity of universal vaccination would be so much more apparent that the purpose of the Committee would be much facilitated.

On motion, it was voted that the Section recommend that the Committee be continued.

Dr. C. A. Lee introduced *leakage of gas pipes* as a subject well worthy of the consideration of the Section and of the Association.

On motion, it was voted that Dr. J. C. Draper, of New York, be requested to prepare a report for the next session of the Association on the leakage of gas pipes.

THIRD SESSION, MAY 3.

ON ALCOHOL AND ITS RELATIONS TO MAN.

This paper, on Alcohol and its Relations to Man, by Dr. Gerard F. Morgan of Maryland, was presented and in part read by Dr. Dunbar, member of the special committee with Dr. Morgan to present a report upon this subject.

After some discussion, it was, on motion, voted that the report presented by the Committee on the subject be referred to a new committee, to report at the next session.

Dr. Dunbar, of Maryland, Dr. T. Antisell, D. C., and D. N. S. Davis, Ill., were nominated, and the request referred to the Association.

Adjourned *sine die*.

SECTION ON SURGERY.

Dr. A. C. Post, in the Chair; **Dr. J. H. Burge**, Secretary.

FIRST SESSION, MAY 1.

At a meeting of the Surgical Section of the American Medical Association, held at the Dental College, corner of Hanover and Lombard streets, Baltimore, Md., May 1, 1866, at 3 o'clock P. M., Dr. Alfred C. Post, of New York, was elected Chairman, and Dr. J. H. Hobart Burge, Secretary.

There being no report of the papers which had been referred to this Section, a motion was made to adjourn, to meet again at the same place at 3 o'clock P. M. on Wednesday, 2d instant. Carried.

SECOND SESSION, MAY 2.

The Surgical Section met at 3 o'clock, pursuant to adjournment.

Dr. Post in the Chair.

Dr. J. S. Cohen, of Philadelphia, offered a paper by Dr. J. M. Boisnot, of the same city, on Fracture of the Patella, and exhibited an apparatus for its treatment. On motion, the paper was referred to the Publication Committee.

Dr. J. S. Cohen read a paper on Vocal Paralysis, with Aphonia, cured by the application of stimuli and by the use of what he called vocal gymnastics. The paper was referred to the Publication Committee.

Dr. J. J. Woodward, U. S. A., chairman of Committee on Causes and Pathology of Phyæmia, presented a very elaborate paper. The Section listened for nearly an hour, when several members expressed their great interest in the communication, but owing to the shortness of the session it was voted to refer it at once to the Publication Committee, with the recommendation that it be published in full.

Dr. Woodward also presented some very beautiful photographs illustrative of the success attained in micro-photography. In these specimens microscopes of very differing powers had been used.

Dr. A. C. Post, of New York, exhibited an original instrument for the bilateral operations of lithotomy.

Dr. J. C. Hutchison, of Brooklyn, said he had used the instrument with satisfaction, and therefore moved that Dr. Post be requested to furnish a description for publication in the Transactions of this Association. Seconded and carried.

Dr. Post presented, also, a new instrument for making applications to the os uteri. It consists of a straight and rather slender pair of forceps, made short for convenience of carrying, but when in use elongated by a handle screwed thereupon. By a slide upon the forceps the blades are approximated and made to close firmly upon any object. The Doctor observed that it might be used either as a forceps to hold any substance which the operator might wish to apply, or to remove extraneous substances from the vagina.

Dr. Post also presented a small instrument to facilitate the introduction of insect pins for sutures ; some of these pins being so delicate that without such guide they bend and become useless. The instrument consists of a sharp-pointed, slightly-curved, grooved needle —the groove being in its long axis. In using, the needle is to be introduced to the very position which the pin is intended to occupy. The pin is then guided by the groove, carried to its place, and held there while the needle is withdrawn in the backward direction.

Dr. H. R. Storer, of Mass., presented an instrument which he called "The Clamp Shield," designed by him to lessen the dangers of extirpation of the uterus by abdominal section, and read a paper on the subject, which was referred to the Committee on Publication.

FOUR OPERATIONS FOR LITHOTOMY ON SAME PATIENT.

Dr. J. C. Hughes, of Iowa, reported a case of vesical calculi, in which he had four times performed the bilateral section in the same patient. When the second operation became necessary lithotrity was attempted, but failed. At the time of the third operation the patient was much emaciated and very feeble, yet he recovered nicely. In less than another year the fourth operation was demanded, when twelve calculi were removed ; drawings of these accompanying the papers. Dr. Hughes spoke highly of the bilateral as compared with the lateral operation, having performed it twenty-one times with the loss of but a single patient.

The paper was referred to Publication Committee.

Dr. Hughes also spoke of a new method of operating upon limbs which were both curved and shortened. He said Barton's mode was to saw out the V-shaped portion of the bone on its convexity ; but as Dr. Hughes wished both to straighten and lengthen the limb, he cut down on the convex side, and passing a chain-saw around the bone, made a partial section on the side of its concavity, and then used such manual force as was necessary to straighten it—thus leaving a chasm to be filled instead of losing an additional inch.

It was moved by Dr. H. R. Storer, of Mass., that Dr. Hughes be requested to write a description of the operation for insertion in the Transactions of this Association.

On motion the Section adjourned to meet at three o'clock P. M. to-morrow, May 3d, in the same place.

THIRD SESSION—MAY 3.

The Section met at the appointed hour. Dr. Post in the chair.

Dr. Lewis A. Sayre, of New York, moved that Dr. Post be requested to furnish for the Transactions of the Association a description of his grooved needle, previously exhibited. Dr. Sayre thought the thanks of the profession were due to Dr. Post for this unpretending but eminently useful instrument. Carried.

Dr. Sayre then read a paper on Luxation of the Femur into the Ischiatic Notch, of Nine Months' Standing reduced by manipulation.

Referred to Publication Committee.

Dr. Dewit C. Enos, of Brooklyn, read a paper on the Intra-oral Method of operating for Removal of Lower Jaw.

Referred to Publication Committee.

Dr. George M. McGill, U. S. A., presented a paper advocating the adoption of a periosteum flap in all amputations in the continuity—including a report of five cases. The Dr. exhibited casts of two of the stumps after these operations, which were beautifully oval.

Paper referred to Publication Committee.

Dr. Enos thought the suggestion of Dr. McGill a good one, but in one in which he had made a periosteal flap in his own practice there had been such a reproduction of bone as to necessitate a second operation.

Dr. Louis Elsberg, of New York, read a paper On the Means of Diagnosis at present available in Diseases of the Larynx, with full directions for the use of the Laryngoscope.

On motion, referred to Publication Committee.

Dr. B. J. Raphael, of New York, stated that Dr. Montrose A. Polk, of ———, made a partial report in 1860, on ———, and moved that the committee be continued. Carried. On motion of Dr. Rapheal, Dr. E. Krackowizer, of New York, and Dr. J. S. Cohen, of Philadelphia, were appointed a Committee to report on the subject of Local Anæsthesia. Dr. Post made some remarks on the subject of partial anæsthesia and the co-operation of the intelligent patient with the practitioner.

On motion of Dr. B. J. Raphael, Dr. Henry D. Noyes, of New York, was appointed a cemmittee to report on the influence upon vision of the abnormal conditions of the muscular apparatus of the eye.

On motion of Dr. E. Krackowizer, of New York, Dr. Raphael was appointed a committee to report on the comparative merits of the different operations for the extraction of vesicular calculi.

Whereupon the Section adjourned *sine die*.

NEW YORK ACADEMY OF MEDICINE.

STATED MEETING, JUNE 20, 1866.

Dr. James Anderson, President, in the Chair.

LAMINARIA DIGITATA.

Dr. Worster presented specimens of the *Laminaria Digitata*, or Sea-tangle, from the Bay of Fundy, where it may be found in abundance at a very low tide point in the protected coves. He claimed a superiority over the English article, which, owing to its brittleness, is fast going out of the market, while these specimens possessed not the bad fetor of the compressed sponge, and were as tough as rope-yarn. The *Laminaria digitata* is for the most part derived from the Straits of Magellan, the British Channel, and in this instance the Bay of Fundy. For all practical purposes, no variety had given him the satisfaction of the last mentioned.

THE PREVENTION OF EPIDEMIC CHOLERA.

Dr. Harris presented a series of resolutions for the prevention of Epidemic Cholera:

Whereas, the New York Academy of Medicine has endeavored to promote among its own members, and throughout the medical profession, a spirit of exact and practical inquiry in the preventive and remedial treatment of epidemic cholera; therefore, be it

Resolved, That this Academy hereby expresses its confidence in the utility of general and specific hygienic measures as the best means of protection against the pestilential prevalence of cholera in any locality where it makes its appearance; and that the most thorough scavenging, cleansing and disinfection are absolutely necessary means of averting this pestilence in the cities and populous towns of our country at the present time.

Resolved, That in the judgment of the Academy the medical profession throughout this country should, for all practical purposes, act and advise in accordance with the hypothesis (or the fact) that the cholera diarrhœa and "rice-water discharges" of cholera patients, are capable, in connection with well known localizing conditions, of propagating the cholera poison; and that rigidly enforced precautions should be taken in every case of cholera to permanently disinfect or destroy those ejected fluids by means of active chemical agents; also that with the same object in view, the strictest cleanliness of person and premises should be enforced upon all who have charge of the sick: also that all privies, water-closets and cesspools should be kept thoroughly under the control of disinfectants.

Resolved, That we regard the nature and causes of cholera infection, so far as the sick or their discharges can propagate it, as being susceptible of control and that there should be no fear or hesitancy in the personal care of the sick and all that pertains to them.

Resolved, That immediate and thorough cleansing and disinfection of all persons, clothing, and things that have been exposed to the discharges or persons of the sick with cholera, constitutes the chief end and object of any rational quarantine or external sanitary police regulation against cholera.

Resolved, That, for the purposes here mentioned, an external sanitary police is desirable in all great maritime and river towns, but that such sanitary regulations need not seriously embarrass commercial intercourse and the interests of trade.

Resolved, That the main source of protection against epidemic cholera at the present time is to be found in the vigilant and effective operation of sanitary measures, municipal, domestic and personal.

Resolved, That the New York Academy of Medicine cordially invites the physicians of every city and village throughout our country to urge the immediate adoption of adequate measures of sanitary protection against the introduction and ravages of cholera, and that to this end we pledge our brethren and the public the hearty and continued co-operation of the Academy.

Dr. Post moved that the resolutions be considered *seriatim*, whereupon the preamble and first resolution were carried unanimously.

Dr. Herzog contended that the language of the second resolution was faulty, in that no expression was given to the fact that the choleraic excretions, to produce mischief, must be in contact with the soil, the linen, or some agent capable of producing fermentation.

Dr. Harris explained that, although he agreed in the main with the last speaker, he had been careful, in the framing of the resolutions, not to endorse any theory, however ingenious: and that his object was to construct a platform upon which the whole profession might stand. With this end in view, he had refrained from introducing any reference to questions of temperature, moisture, &c, in so far as their operation upon organic materials was concerned. Pettenkofer's views were not yet adopted as a whole by the profession; the evidence was yet to be sifted, the facts to be reviewed and tested.

Dr. Herzog maintained that, as a scientific body, the Academy should express scientific facts; and that even theories, when strengthened by experiments, afforded a certain amount of knowledge worthy of expression, if not endorsement. He would therefore favor a remodelling of the language, if for no other reason than to inspire confidence. He contended that knowledge was limited in more instances than the question now being discussed; that a mere vesicle gave no clue to the character of the virus it inclosed; that conviction came only after the disease had manifested itself by its behavior, effects, etc. Choleralogists had agreed that there was no specific difference between spasmodic and Asiatic cholera; and what was true of the one was also of the other.

Dr. Sayre expressed the view that there was a difference between the American and Asiatic cholera; that the former was not capable of propagation, while the latter was. He would conjure Dr. Harris to put down his conditions and defend them with courage.

Dr. Harris averred that caution in the use of words was as essential as courage; that too much might be said as well too little, and cited

Professor Parkes and Dr. Wm. Budd, of England, as authorities in the support of his position. He would, however, amend the text in dispute so as to read as follows:—"That the choleraic diarrhœa and 'rice-water' discharges of cholera patients are capable (*in connexion with well known localizing conditions*) of propagating the cholera-poison," etc., etc.

The amendment was agreed to, and the resolution as a whole adopted.

The third resolution, relating to the danger of personal attendance upon the sick and the controlability of the causes of cholera, was then adopted without debate.

The fourth resolution enjoined thorough cleansing and disinfection of persons and clothing. Carried.

The fifth read as follows:

"*Resolved*, That for the purposes here mentioned, an external sanitary police is desirable in all great maritime and river towns, but that such sanitary regulations need not seriously embarrass commercial intercourse and the interests of trade."

Dr. Sayre said that it was necessary that definite views, as emanating from responsible bodies, should be extensively circulated. He could not but condemn the action of the Board of Consulting Physicians in Boston, Mass., to whom he had sent facts incontrovertible, with the result of finding them ignored, and such phrases as these adopted in the room of logical conclusions: the Board regrets the "change of views" on the part of Dr. Reid, "the cholera cannot be barred out," it "comes through the atmosphere," and was a "something upon the people." Such high authority should be met, otherwise vague deductions would take the place of positive knowledge.

Dr. Herzog pronounced quarantine to be the true safety-valve. Periods of variable length had been adopted by different authorities, extending from ten to twenty-two days; the International Quarantine Convention, for instance had fixed upon fifteen days as the limit. There could be no doubt that a certain time for incubation was necessary, but the time embraced by it had not yet been very accurately determined. Dr. Pettenkofer, indeed, had opposed quarantine regulations, owing to the difficulty of rendering them effective.

Dr. Sayre said that Dr. Pettenkofer did not oppose the *principle* of quarantine; but, on the contrary, was a firm believer in it.

Dr. Herzog, in further elucidation of his views regarding the incubation of the disease, gave the history of the origin of the epidemic upon Ward's Island. He said that it had been brought from the "Atalanta" by a nurse who had been ten days aboard of the vessel, and had been admitted into the State Emigrant Hospital for a sore foot, where he remained five days. The cholera manifested itself six days after this patient's departure.

Dr. Harris, without defining the nature of cholera, said that quarantine had saved Rome; but Rome was to-day worse off for the infliction, if the accounts of privations, etc., as given by those then sojourning here, be accepted. He did not hold that quarantines, as at present conducted, should be regarded as blessings; and yet the Board of Health were obliged to shoulder the whole responsibility.

Dr. Sayre thought Dr. Harris somewhat inconsistent. If quarantines were useless and could not be enforced, why not abolish them at once. Again, if quarantines were only pest-holes, from which leakages were to constantly occur, they should by all means be abandoned; if no good resulted, commerce should not of course, suffer.

Dr. Harris suspected that the cases which had recently occurred in the city were traceable to infected clothing from the cholera ships; a quantity small, to be sure, but sufficient for mischief, may readily have been introduced into the city after escaping the vigilance of officials. Such clothing would most likely be found in Pitt, Willett, and like streets of that section of the city. He would cite as a probable corroboration the case of the patient in Thirty-fifth street, who was seized with the disease after a visit to that quarter.

The resolution was then, on motion, adopted.

The sixth resolution, expressive of confidence in the protecting influences of "sanitary measures, municipal, domestic, and personal;" and the seventh, inviting the profession in general, wherever dispersed, "to urge the immediate adoption of adequate measures of sanitary protection," were, on motion, severally adopted as the sense of the Academy.

Dr. Bell (of Brooklyn) made some remarks upon *steam disinfection*, in which he gave an account of the results of experiments at Seguin's Point.

Dr. Bulkley had recently seen an apparatus for superheating steam, where the steam was also dry.

Dr. Hamilton moved that Dr. Bell be requested to report on that subject to the Academy at the next meeting. Carried.

DEBATE ON THE RESOLUTION ENDORSING THE HEALTH BOARD.

Dr. Sayre remarked that his previous motion, calling for a reconsideration of such part of the minutes of a past meeting as related to the resolution endorsing the Health Board, was now in order. As illustrating the sense of the profession at large and the interest excited by this action of the Academy in a neighboring city, he quoted at length an article from the *Medical and Surgical Reporter*, Vol. XIV., page 474, under the caption of "The Metropolitan Board of Health and the Academy of Medicine; a point of Ethics." He fully endorsed its sentiments, and adverted to a former action of the Academy, by which, as a body, they voted to withdraw all official and professional intercourse with the respective heads of the Medical Bureaus, should the so-called system of Homœopathy be recognized in the appointments then to be made. In the present instance, according to the secular press—and the reports all agree, at least they have not been denied—"Homœopathic" appointments have been actually made. He hoped that the Academy would not jeopardize its standing with the American Medical Association, by allowing the minutes to stand as at present recorded.

Dr. Post stated that this resolution was intended to offer the co-operation of the Academy to the Health Board, only so far as sanitary measures were concerned. Still, if the language of the resolution were open to misconstruction, and to the charge of endorsing Homœopathy by implication, he would make the sense of the meeting clearer by offering a supplementary resolution disclaiming any such intention. The resolution, thus amended, was then offered.

Dr. Hamilton said that the medical members of the Health Board had been simply outvoted, and that all of the gentlemen in question were well known as being opposed to Homœopathy.

Dr. Sayre replied that it was essential that the record of the Academy, as far as this question was concerned, should be *preeminently* clear. These homœpaths, rejoicing in their seeming triumph, claim to have been endorsed by the Academy, and would with this seeming endorsement be more clamorous than ever for recognition in all Hospital appointments.

He questioned the honesty of the phrase as substanially used by Dr. Stone; looking to the conciliation of popular prejudice; it was the duty of every member of the profession however humble, to be true to himself in his conflict with error. Dr. Parker has said before the Health Board that he at times practised homœpathy also, and besides all this, some claim that he was even allowed to practice it in his own family.

Dr. Hubbard stated, in vindication of Dr. Parker, that the circumstance which originated one of the reports, arose in this way: Dr. P. had, it is true, allowed a homœpathic practitioner the charge of his child soon after his arrival in the city. He desired to put to the test the homœopathic boast that hooping-cough was curable by their treatment One of these practitioners was exchanged for another, with the result of merely confirming Dr. Parker's incredulity regarding "the potencies." He stated this on the authority of Dr. Parker himself, with whom he had conversed in regard to the matter.

Dr. Hamilton was convinced that Dr. Parker's language before the Board, to the effect that "he practised homœopathy," had been misconstrued; that he believed his intention was to convey the idea that in certain cases he (Dr. P.) also practised homœopathy, in the sense of non-interference, when the case demanded it.

Dr. Bibbins inquired whether, or not, the Academy was inclined to homœopathy? If not, then let the contrary be distinctly stated. When one yields out of respect to the prejudices of others, can he act according to his own convictions of right; nay more, can he claim our confidence? Why may not Dr. Stone, with equal propriety, give Dr. Newton, who cures "by the laying on of hands," an opportunity of testing his system also? Dr. Newton can boast of throngs, where we can claim individuals only. Surely here this is enough manifestation of this self-same "popular prejudice;" why not then, by a parity of reasoning, place him in a position to exercise his remarkable power? Give every therapeutical plan an equal chance, for all have advocates, more or less numerous. We find Drs. Parker and Stone mingling in the debate at the second meeting of the Board: "Let us try it," say they; "if it be the proper practice, let us practice it ourselves." Are not these doubts almost admissions? Again, is the Board anything more than a political body; and has the Academy ever before made haste to endorse any similar corporation? When it changes its political complexion, what then? Other men of other medical creeds may be appointed; it may be politic to do so; there may be other combinations; a different administration of affairs may supplant the present, for such is the history of all political bodies. As citizens do not expect the Board of Excise to concede anything to the prejudices of a very powerful party opposed to it, why then, as medical men, should we yield to any heresy, however respectable or numerous its supporters? He was far from impugning the motives of Dr. Post when he offered the original resolution; that gentleman's views were well known. He simply contended that the record of the Academy should be clear and not open to misinterpretation.

Dr. Van Kleek took the view that Dr. Post's original resolution was not meant to cover every vote, debate and action of the Board, but had reference to general hygienic measures only. He thought that the matter was well enough understood, and that all of this hubbub was unnecessary.

The supplementary resolution was then passed, and copies of the same were, on motion of Dr. Sayre, directed to be sent to Drs. Parker and Stone, Commissioners of the Metropolitan Health Board.

The Academy then adjourned.

NEW YORK ACADEMY OF MEDICINE.

INFORMAL MEETING JULY, 5, 1866.

Dr. James Anderson, President in the Chair.

The Academy held an informal meeting on the evening of the 5th of July, there being not a full quorum present.

Dr. A. N. Bell, of Brooklyn, who had been appointed at the last stated meeting to remark upon disinfection by superheated steam, at the request of the members, reported progress and gave a history of the circumstances which first led him to consider that agent a powerful and efficient one. While in the naval service, many years ago, the captain of the ship of which he was the medical officer suggested to him the propriety of steaming the vessel for the sake of getting rid of the vermin. This was done, and with such good effect, without any injury to the vessel, that the thought occurred to the Doctor, that steam might, by virtue of its destroying powers, upon all organisms, be used for the purpose of disinfection. In the instance referred to, no account of the temperature of the steam was taken, but it was, nevertheless sufficiently high to re-evaporate the vapor that might otherwise have remained on the walls of the compartments and leave them perfectly dry. Having had charge subsequently of a hospital-ship, he had an opportunity for testing the effects of steam in its power to control yellow fever, and he expressed his belief that it would be equally effectual in arresting the the progress of cholera. The question whether steam could be sufficiently heated to destroy every known organism, he maintained was now definitely settled, inasmuch as 284° Fah. had succeeded in decomposing the lowest possible organism. He proposed to apply 300° of heat, which certainly left a margin for contingincies, and he thought that he would be able to promise a certain and complete destruction of every known organism. This immense heat he contended, did no other harm than blistering the paint or melting the turpentine in the wood, the moisture being entirely re-evaported by the high temperature. He then recited some experiments which he had made at the instance of the Health Officer, Dr. Swinburne, at Seguin's Point. By throwing superheated steam, into a room, he raised the temperature up to 280° Fahr., as proved by a self-registering thermometor, and at the end of five minutes the doors were opened, and everything was found perfectly dry, while some eggs and oysters which were contained in the apartment were cooked. In another similar experiment of ten minutes' duration, the only change that was noticed was in the moistened state of the temperature in the pine boards. He thought it necesary that the temperature should be preserved continuously for two hours in order to have its full and desired effect. He stated, in conclusion, that he had placed at his disposal, by the Health Board, one of the metropolitan fire-engines, with which he proposed to give some public exhibitions as to the utility of superheated steam as a disinfectant to such as might be interested. He did not desire that these few desultory remarks should be taken as a formal report, but promised at a future time to present his conclusions in full to the Academy, when the various experiments which he intended making should be completed.

A DISINFECTING CHAMBER-PAIL.

The President then exhibited Rankin's disinfecting Chamber-Pail. The pail is an ordinary one, but has applied to the under part of its cover an apparatus, by means of which disinfecting materials can be made to fall on the stools. The cover is hollow, its lower platform is supplied with triangular openings, the apexes of which point towards the centre. Upon this platform there is another of the same size with like openings. By means of a spring attached to a knob passing through the top of the cover, the lower platform of the cover is kept closed by the upper one. When the stool has been passed and the lid closed, this knob is turned, and the openings of the two lower platforms correspond, and the powder or other disinfecting meterial falls into the vessel, when by letting go the handle the reservoir containing the disinfectant is shut.

Dr. Griscom remarked that this was a very excellent apparatus, and would serve the double purpose of not only disinfecting the dejections, but would help to purify the sewers.

The question as to the best and cheapest disinfectant then came up, when Dr. Harris stated that sulphate of iron as a powder ranked first, and the refuse of coal tar as a fluid took the second place. Both were very cheap, but the former would probably be the most popular.

Dr. Hamilton remarked that Rankin's apparatus could not very well be applied to the water-closet The apparatus was only intended for powdered disinfectants, and if adapted to the water-closet, these powders would become more or less moistened by the splashing of the water from the basin below, and would corrode the vessel which contained them. He thought an improvement might be made upon the apparatus by having it adapted for fluids.

The President then stated that such improvement could easily be made by having a pipe containing the disinfectant so connected with the one leading the water into the basin, as that both could be acted on at once by pulling up the knob in the seat.

Dr. Harris remarked that it was very necessary not only to have a disinfecting apparatus connected with every privy and water-closet, but it was equally necessary to have some arrangement contrived whereby the apparatus would be self-acting. This was particularly desirable in all public water-closets. If some such arrangement had been made, he thought that the cholera in Elizabethport, N. J., might have been probably prevented from spreading even as far as it did. He then gave an account of the epidemic as it prevailed at that place :

A short distance from Elizabeth City is Elizabethport. The Germans from the latter place are in the constant habit of wandering up through Elizabeth City, some to take transportation by railway and others to tarry in the city. About three-quarters of a mile from Elizabethport there is a street called Schuyler street, which is occupied almost entirely by Germans ; only one rookery being occupied by the Irish. In that street a number of German families tarried, some of whom had been on board of cholera ships. These facts were stated to their friends. About five days after a man with diorrhœa had left with his family, the yeople in the neighborhood began to suffer from cholera. The first case, a man with a large family, was traced to the man who had diarrhœa as the cause, the former having been, it is said, in the habit of using the same privy as was used by the latter. This first case of cholera was attended by a devoted daughter, who was the next victim to the disease. The soiled clothing of the father was found in the room and some of the furniture had seemingly been spattered by it. The evacuations, such as could be collected, were removed to the privy, without, however, being previously disinfected. The little girl was attacked the morning after the father's death. The former survived eighteen hours after the first onset of the disease, while the girl died nine hours after. Seven other cases died in the same house, all being in the habit of using the same privy.

The Mayor of Elizabeth hearing of the epidemic, and being a physician, determined to stay its progress by destroying the albuminous fluids wherever found. This he did at the cost of $3,000, which was afterwards refunded to him by the City Council, who approved of the means adopted.

The first case occurred on Monday morning, and the last terminated by Saturday night. Notwithstanding that the inhabitants were in a fit condition to invite the epidemic, and were in fact only waiting for its fearful ravages without attempting to guard against it, yet by the simple means adopted by the Mayor, the epidemic ceased at once.

Dr. Hamilton favored the reference of Rankin's apparatus to a Committee for the purpose of making some improvement in its construction in accordance with the suggestions made.

Dr. Griscom thought that the chamber part was perfect in itself, but was of the opinion that a separate contrivance might be more serviceable for the water-closet.

Dr. Richards suggested that the people might be instructed to introduce their disinfectants into the tank above the water-closet, whence it would descend in solutions directly into the basin below.

A Committee, consisting of Drs. Griscom, Hamilton, Post, and Harris, were appointed in accordance with the previous request.

The meeting then adjourned for the season.

LIST OF BOOKS, PAMPHLETS, &c.,

RECEIVED AT OFFICE OF GALVESTON MEDICAL JOURNAL.

The New York Medical Journal, No. 3, July, 1866.

The New Orleans Medical and Surgical Journal, July, 1866, No. 1, vol. 19.

Southern Journal of Medical Sciences, No. 1, vol. 1, May, 1866.

The Medical Reporter—a montly record of medicine and surgery, St. Louis, Mo.—vol. 1, Nos. 5, 6, 7, 8 & 9; May, June, July, 1866.

The Richmond Medical Journal, Rich. Va., vol. 1, Nos. 5 & 6, May and June, 1866.

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A Description and Critical Bemarks on the Picture of Christ Healing the Sick in the Temple; painted by Benjamin West, Esq. President of the Royal Academy, Londan, and presented by him to the Pennsylvania Hospital.

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Fifty-Eighth Annual Circular of the School of Medicine, Baltimore, Md.

Report of the Board of Managers of the Pensylvania Hospital, to the contributors, at their Annual Meeting, together with the accounts of the Treasurer and Stewards, 1860, '61, '62, '63, '65, 1856, '57 and '58.

State of the accounts of the Pennsylvadia Hospital for the years 1843, '44, '45, '46, '47, '48, '49, '51, '52, '53, '54, 55.

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(PUBLISHED WEEKLY.)

S. W. BUTLER, M. D., EDITOR AND PROPRIETOR.

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aug 3m.

BELLEVUE HOSPITAL MEDICAL COLLEGE,

CITY OF NEW YORK.

SESSIONS FOR 1866-'67.

The faculty take pleasure in referring to the cumulative evidence afforded by the success of this College, in behalf of the importance of the union of clinical and didactic teaching. The class in attendance during the Session of 1865–'66 numbered 470, the number of graduates being 172. The new building within the hospital grounds affords ample accommodations.

The Faculty have instituted a Summer Session, beginning on the first of April, 1867, and ending in the following July. This Session will embrace didactic and clinical lectures. Henry D. Noyes, M. D., has been appointed Professor of Ophthalmology in the Summer Faculty: J. Lewis Smith, M. D., Lecturer on Morbid Anatomy, and Foster Swift, M. D. Lecturer on Diseases of the Skin. Professor W. H. VanBuren, M. D., has been appointed to a newly created Professorship of the Diseases of the Genito-Urinary System. Professors Doremus, Elliott and Flint, Jr. will, in addition to the foregoing, take part in the Summer Session. A further account of this Session, with the fees and regulations, is contained in the annual circular for 1866-'67.

The usual preliminary Autumnal Session will commence on Wednesday, Sept. 12, 1866, and continue four weeks. Instruction during this term will, as hitherto, consist of didactic lectures on special subjects, and daily clinical lectures The lectures in this term are given exclusively by members of the Faculties. The regular Winter Session will commence on Wednesday, October 10, 1866, and end about the first of March, 1867.

FACULTY OF THE COLLEGE.

ISAAC E. TAYLOR, M. D., President. AUSTIN FLINT, JR., M. D., Secretary.

James R. Wood, M. D., Professor of Operative Surgery and Surgical Pathology.
Frank H. Hamilton, M. D., Professor of Military Surgery, Fractures and Dislocations; and the Principles of Surgery.
Lewis A. Sayre, M. D., Professor of Orthopedic Surgery.
Alexander B. Mott, M. D., Professor of Surgical Anatomy.
W. H. VanBuren, M. D., Professor of Diseases of the Genito-Urinary System.
Isaac E. Taylor, M. D.,
George T. Elliot, M. D., } Professors of Obstetrics and the Diseases of Women and Children.
Fordyce Barker, M. D.,
Benjamin W. McCready, M. D., Professor of Materia Medica and Therapeutics.
Stephen Smith, M. D., Professor of Descriptive and Comparative Anatomy.
Austin Flint, M. D., Professor of the Principles and Practice of Medicine.
R. Ogden Doremus, M. D., Professor of Chemistry and Toxicology.
Austin Flint, Jr. M. D. Professor of Physiology and Microscopy.
N. R. Mosely, M. D., Demonstrator of Anatomy.
J. W. Southack, Jr. M. D., Assistant Demonstrator of Anatomy and Prosector to the Chair of Operative Surgery and Surgical Pathology.
A. W. Wilkinson, M. D. Assistant to Chair of Chemistry and Toxicology.
Henry G. Piffard, M. D., Assistant to Chair of Principles and Practice of Medicine.
Lucien Damainville, M. D., Assistant to Chair of Military Surgery, etc., etc.

Fees for tickets to all the lectures during the Autumnal and the Regular Winter Session* $140 00

Tickets for any of the several departments may be taken out separately.

Matriculation Fee, $5 00. Demonstrator's Ticket, $10 00. Graduation Fee, $30 00

Students who have attended two full courses in other accredited schools receive all the tickets for $70, exclusive of the Matriculation Fee. Students who have attended two full courses in this College, or after one full course in this College, having previously attended a full course in some other accredited school are required to matriculate only. Graduates of other accredited schools, after three years, dating from the time of graduation to the end of the term, are required to matriculate only; prior to three years they receive a general ticket for $70.

Payment of Fees is invariably required at the commencement of the Session. There are no exceptions to this rule.

Students on arriving in the city are requested to report at once at Bellevue Hospital, situated on the East River, between 26th and 28th Streets, and inquire for the Janitor of the College, who will take pains to aid them in securing comfortable accommodations without delay. Entrance to the Hospital is on 26th Street.

For the Annual Circular giving further information, address the Secretary of the Faculty, Prof. Austin Flint, Jr. Bellevue Hospital Medical College.

* The fees in this College are raised in common with the Colleges of New York and Brooklyn, Philadelphia and Boston. aug-3m.

THE

Galveston Medical Journal.

Vol. I. SEPTEMBER, 1866. No. 9.

Dr. T. J. Heard on Cholera.

Mr. Editor:

The following brief articles on Cholera were published in the Galveston News, at my instance, on the 5th and 14th of August last. The motive which prompted me, at the time, is set forth in the papers:

CHOLERA.

August 5, 1866.—I assume, as cholera is now in our midst, that it will extend—and probably soon invade the interior towns, and also the country.

That it is infectious in a limited sense of the term, but is in most instances propagated by means of *fomites*, is generally admitted. That all the researches of the most favored men of the medical profession have shed but little light on the nature of the disease or its treatment;

That in this disease there is a complete perversion of the functions of the organs of organic life; and that the abdominal viscera, if not chiefly affected, are at least most tangibly so;

That the liver, which is the great depurator of the blood brought from the abdominal viscera to the heart, in case of cholera, whether from change of relationship between the liver and blood, or some other cause, opposes almost a complete barrier to the returning blood. Hence great congestion of the abdominal viscera;

That nature, in this case, as in almost all others, when not perverted by good intentions or otherwise, relieves the congestion of the abdominal organs, and thereby prolongs life by pouring out the more liquid parts of the blood into the stomach and bowels ;

That the functions of the digestive apparatus are completely deranged—so changed in character as to be wholly unfit for the great objects of life ;

That the liver and pancreas, normally secrete an alkaline fluid, which is not only sufficient to neutralize one of the normal elements of gastric secretion, viz., acid, but any reasonable amount of acid which may be taken with the ingesta ;

That owing to the perversion of the functions of the liver and pancreas, they fail either to furnish the quality or quantity of fluid necessary to neutralize the acid in the stomach—and hence the ingesta in an acid state passes into the bowels, and proves irritant to the whole tract of the bowels, from which results not only in a good degree the profuseness of the rice water discharges, but nausea, &c., &c

Without any desire to extend for the present these remarks, intending them only as suggestions, it is proposed to close with what, both as deductions from the above assumed premises and from personal observation, are considered just indications of treatment.

1st.—To allay the irritability of the stomach and to correct the acidity of the stomach and bowels, in default of nature's own correctives, and to supply *free carbonic* acid to those mucous surfaces, instead of irritating acid, &c., as found to exist in this abnormal state of the economy, (for it is assumed the free carbonic as a sedative to the mucous membrane of alimentary canal is superior to any known agent.) The following is submitted. Take

Bi carbonate of soda	½ oz.
Creosote	4 drops.
Oil peppermint	4 drops.
Water	1 quart.

Mix.—Dose : a wine glass full every five minutes or oftener, until the urgency of the case has passed. The frequency of the repetition of the dose must be determined by the urgency of the case—and the effect of the remedy. Small bits of ice may be allowed every few minutes.

In connection with the above, a hot fomentation of strong whiskey should be kept on over the entire abdomen. It may be used in this wise : An old soft towel four-double may be saturated in the whiskey, or any strong spirits, as brandy or rum, and be laid over the entire abdomen ; over this should be laid closely oil silk, india rubber cloth or anything of the kind, the object being to prevent evaporation. This application may be renewed every fifteen minutes, until the patient is better.

So soon as the irritability of the stomach is in some degree allayed by the above means, the following may be used. Take

Calomel	10 grs.
White sugar	10 grs.

Mix.—Make twenty powders.

Take one dry on tongue every half hour, with a little of the soda mixture, until the discharges from the bowels give evidence of bile.

The patient should be kept as quiet and as comfortable as possible. Stimulants are often pressed on patients—*greatly* to their hurt. Opium is often used as though it possessed any curative properties in this disease. It may be used, if clearly indicated, after the liver has been aroused to action, but until then it is manifestly hurtful. The same may be said of astringents so far as any curative effect is concerned. As respects diet, as a matter of course nothing in the way of aliment can be allowed until the liver, &c., have been restored to their functions.

Injections of solution of the bicarbonate of soda have a very happy effect. To one pint of lukewarm water ½ oz. of the soda may be added, and the whole given by injection at once, if the patient can be induced to detain it. Should it be returned the injection should be repeated from time to time till it is retained.

In the above remarks, so far as regards the doses—viz.: quantities suggested—a male adult is supposed to be the patient.

The remarks on this subject, published in your paper some week or two since, were intended as much for the medical profession, if not more, than for the people at large. It is believed by the author that the doctrine set forth, as well as the treatment suggested, will be found, on careful trial and due reflection, to tend, so far as it goes, in the right direction to the elucidation of this mysterious affection. It will be seen, by comparing the previous remarks with the views of the great mass of authority, and the practice as pursued by most of the physicians of this or any other period, that they are in the main at variance.

It is believed by the author that cholera is strictly a blood disease, and that what is, as a rule, looked on as an attack of the affection is an effort on the part of nature to eliminate the poison from the system. Such being the case, as is believed to be true, it certainly does seem the rational practice to co-ordinate the functions of organic life as soon and as fully as possible—thereby the more effectually relieving the system of the poison.

It is proposed briefly to amplify the previous remarks by making a few suggestions under the following heads: 1st, opium; 2d, stimulants; 3d, astringents; 4th, antispasmodics; 5th, diet.

1. Opiates.—There is but one stage in which this class of remedies can be safely used, viz.: After the secretions have been restored and the pateent is unable to get his usual amount of sleep. In that case a pill of the following character will be best: Take gum opium, 10 grains; ipecac, 10 grains; gum camphor, 10 grains; castile soap, 20 grains; mix; make ten pills—dose, one pill every hour and a half at night until composed.

2. Stimulants.—This class of remedies is greatly abused. The best

rule we can adopt in regard to their use, is to consult the patient's unbiased appetite or desire.

3. ASTRINGENTS.—This class of remedies cannot be of any service until the liver has been restored to its functions; when that has been accomplished, in case the passages are still large, frequent and watery, sub. nitrate of bismuth in 20-grain doses in a wine glass of the soda, &c., mixture, may be taken occasionally, as found necessary.

4. ANTISPASMODICS.—As a rule these, as ordinarily understood, can do no good. If the patient is kept quiet and comfortable, has the hot whiskey fomentations to the abdomen, the soda, &c., mixture and calomel, say every ten or fifteen minutes, with a lump of ice now and then, and the soda injection as above directed, I feel I do not venture much in saying the prospect for life under this treatment will be as good as under any now praticed.

4. DIET—Should be of the lightest nature, such as rice water, for some hours after liver has been restored to its functions. But nothing in the way of aliment should be taken until this is accomplished. Milk may be added to the rice by and by, but for days the diet should be very light, bland and of the most digestible character. A small quantity only being allowed at a time.

After reviewing the above papers, I am of opinion that, though I might improve the style and verbiage, that I have nothing to retract, and but few additions to make.

As regards treatment, I will simply say that I have found the soda, &c., mixture in the primary state, in all cases where I have seen it used, to relieve every symptom in a very short time—I mean in the stage which is called cholerine. The calomel need not be used necessarily in this state, but the bismuth very often may, in connection with the soda, &c., mixture, with great confidence of relief being afforded in a few hours.

I can not protest in too strong terms against the use of the large doses of chloroform, laudanum, cayenne, camphor and such like remedies, as are but too frequently, in my opinion, very unnecessarily given. I can well understand that chloroform may, in some extreme cases, in small doses, 5 drops in a dose of the soda, &c., mixture, be of service.

I feel I would have this short paper more incomplete than I wish should I not insist on the soda injections and fomentations of whiskey or some other strong spirits to the abdomen. I have seen too much benefit from those means not to insist on their use faithfully in all bad cases.

It may be said, why persit in injecting the solution of soda up the rectum, seeing it is returned in a few minutes? My reply is, each injection returned brings away offending matter, and that so soon as the offending, poisonous matter, if you please, the bowels will tolerate the injection, viz: it will be retained and the patient will be on safe ground. Again, the injections do not weaken the patient, and cannot be objected to on that score.

It would be out of place, not only so, I have no disposition to attempt a review, however briefly, the thousand papers which have appeared on this mysterious disease. But of this I feel confident, that the system of organic nerves bear the main force of the cholera poison; that the solar plexus is primarily disturbed; and that the organs in nearest relation to it are the first to experience functional derangement. That whenever the cholera poison has been imbibed, as I believe, chiefly through the stomach, in such quantities as to pervert the functions of the digestive apparatus, that diarrhœa, &c., is the consequence, and the danger from the poison depends on the power of vital resistance—the harmony and tone—especially of the organs primarily concerned in the digestive process, for it is my opinion that the elimination of the poison through the alimentary canal and kidneys is chiefly affected.

Local Items.

CHOLERA, REMITTENT FEVER, YELLOW FEVER, &c.

We have been permitted to extract the following items in reference to cholera from the report of the Surgeon of the U. S. Hospital and Quarantine Surgeon (Assistant-Surgeon Robt. B. Bronne) to the Surgeon General U. S.

The "cases, with one exception, occurred among some unassigned recruits, designed for the 17th Infantry, who arrived in this city on the morning of the 22d of July, from Heart's Island, New York Harbor, via New Orleans. All true cases of Asiatic cholera having had their origin at Heart's Island, where, it appears, the disease prevailed, although in a mild form, previous to the departure of the troops therefrom.

The first patient taken sick was admitted into hospital at 7 A.M., on the day of their arrival, in a collopse state—extremities icy cold; skin shrunken and of a livid color; expression of countenance cadaverous and anxious; respiration difficult and hurried, and his pulse almost extinct. On being questioned the patient represented that on the day previous he had slight looseness of the bowels, attended with some pain, which continued more or less until 11 o'clock A.M. next day.

When, while engaged on fatigue duty unloading a vessel at the wharf, he was suddenly prostrated and at once taken with violent vomiting, cramps in the stomach and extremities, and excessive purging.

Previous to his admission into hospital a mixture of chloroform, tinc. opium, capsicum and camphor had been given him.

Was treated in the hospital internally with large draughts of dilute. sulphuric acid water, repeated every fifteen minutes, containing at each dose 30 drops of the acid; externally, by the application of mustard poultices to the extremities and abdomen. Under this treatment patient seemed to rally somewhat, and was the next day apparently decidedly better. The vomiting and purging having ceased and the heat of skin having been restored.

The prostration continued, however, without a renewal of the other symptoms. He gradually sunk, and 10½ P.M., the 23d, died.

There was in this man's case, from the commencement, a complete suppression of urine.

The case was a man of regular habits, not addicted to excesses of any kind; was taken at "Roll-call" on the morning of the 23d; was in the act of saluting his officer when he suddenly fell to the ground with violent spasms of the extremeties, soon followed by vomiting and purging, sinking of the pulse, shrunken skin, &c., as in the other case.

"Gave him 15 grs. of calomel combined with 4 grs. of opium. Began to improve about 8 P.M. same day" and recovered.

Next case was apparently well until the morning of the 24th. Prepared breakfast for the men as usual—was then taken suddenly ill with similar symptoms as in the other cases. Sank rapidly—died at 4 P.M. 25th.

4th case ———, recruit, was taken sick during the night of the 25th. Symptoms similar to those described in the other cases. Sulphuric acid treatment and calomel combined. Died at 4 P.M. 25th.

5th case differs from the others, as he seems to have contracted the disease from contact with the patients brought into hospital, as at the time of his arrival he was serving in the hospital as an attendant, having been an inmate of the hospital for three weeks previous. On the 22d instant he had an attack of diarrhœa, and on the 35th instant, at 10½ P.M., was suddenly sized with violent cramps, vomiting, prostration, &c., as in the other cases, and died the following morning at 7 o'clock. This man had decided and copious rice water discharges from the bowels.

In all other cases the evacuations had more of the appearance of muddy water.

There were during August 34 cases and 18 deaths. There was one other death amongst the freedmen, and the Lieut.-Colonel died, making in all 20 deaths. The troops were removed from their quarters on the 12th August, but the disease had ceased before their removal.

CHOLERA IN THE CITY.

We extract the following from a city paper of the 20th Sept.:

From the sexton's report for the month of August, we find there were 81 deaths in Galveston during the month, of which 17 were from cholera, 13 cholera morbus, 9 from dysentery, the remaining 42 from dropsy, lung diseases, old age and other diseases. There were 13 interments the first week, 28 the second week, 21 the third week, 16 the fourth week, and three the remaining or last three days of the month.

An examination of the above, with the thermometrical reports during the past month, will show the greatest fatality during the warmest weeks, which fact, take with the deliberate and honest convictions of many medical gentlemen, that many of the cases reported to be cholera, were not cholera, incline us to believe that we have not had any cholera at all originating in the city. In fact some cases were reported cholera by the sexton from hearsay, the attendant physician failing to give in a certificate: But whether we have had that scourge hovering over us or not, it is plain that it has completely disappeared, gone, whither we know not, but probably to some more congenial locality.

In addition to the above there were 34 soldiers buried during the month by the city sexton, of which he makes no official report.

It will be seen that, though we have had at least 30 cases amongst the citizens and 20 amongst the troops, it is still doubted, and the question is still asked, did we have any cases of cholera here at all? Eight of the cases reported in the sexton's report were from the Island City Hospital, and we made post-mortems on all, and I here give the summary, taken down by Dr. R. H. Hanna, House Surgeon at the time:

CHOLERA IN ISLAND CITY HOSPITAL FROM 4TH AUGUST TO SEPT. 26.

1. Aug. 4—Jas. Green; age 40; born in Ireland; from New Orleans; cholera (autopsy). Died 4 hours after admission.
2. Aug. 8—Edwin Smith; age 30; born in New York; from New York; cholera. Recovered.
3. Aug. 13—Mrs. S. Young; age 45; born in United States; from Galveston; cholera (autopsy). Died in 12 hours.
4. Aug. 14—Thos. McLean; age 23; born in Scotland; from Galveston; cholera. Recovered.
5. Aug. 15—G. Wilkes; age 34; born in Germany; from Galveston; cholera (autopsy). Died in five days.
6. Aug. 17—J. Doyle; age 30; born in Ireland; from Galveston; cholera (autopsy). Died in 60 hours.
7. Aug. 21—Tom, f. m. c.; age 30; born in United States; from Galveston; cholera (autopsy). Died in 12 hours.
8. Aug. 22—John Thompson; age 26; born in Sweden; from Galveston; cholera (autopsy). Died in 16 hours.
9. Jas. Riley; age 24; born in Ireland; from Galveston; cholera. Recovered.
10. (On hand). William Riley; age 22; born in England; from Galveston; cholera. Recovered. Note.—Supervened upon remittent fever in hospital. Was admitted on 21st Aug.; took cholera about 15th Sept.
11. (On hand). Jas. McClearn; age 21; born in Massachusetts; from Galveston; cholera. Recovered. Note.—Cholera supervened upon remittent fever. Was admitted in hospital on 21st August; took cholera about 15th Sept.
12. Pat. Sharkey; age 23; born in Ireland; from Galveston; cholera. Died. Was dying when admitted—lived 10 minutes only.

13. (On hand). Geo. Howard; age 18; born in United States; from Galveston; cholera. Recovered.

14. Sept. 26—(Just admitted). Counsel; born in United States; from Galveston; cholera (autopsy). Died in 13 hours.

R. H. HANNA.

RECORD OF POST MORTEM EXAMINATIONS HELD AT ISLAND CITY HOSPITAL, GALVESTON.—MRS. S. YOUNG, age about 40; widow; admitted August 13th; apparent weight 130.

Post Mortem Appearances.—Abdomen rather full; surface of body, livid; arms and legs rigidly contracted; hypocratic countenance; rigor mortis well marked; brain not examined. Thorax, lungs—hypostatic congestion. Heart, small quantity black thick blood in right ventricle, substance of organ easily torn by fingers; NO SERUM in the pericardium. Abdomen, stomach, 8 oz. of thin, whitish fluid; substance of organ readily torn to pieces by the fingers; mucous tissue decomposed; intestines filled with gas and rice water fluid; coats of illium the whole length of a pulpy, jelly-like consistence appearing like semi-fluid starch; some congestion of the muscular and serous tunics; kidneys congested; urinary bladder small, empty and contracted.

Liver—small quantity black, thick blood in the vena portæ; substance of organ gray, softened, easily broken up by the fingers; *some* thick bile in gall bladder. The peritoneal cavity devoid *of serum and dry*. Was rational until death

Previous Medical History.—This woman was of humble circumstances and had been accustomed to the use of ardent spirits for many years. Had been intoxicated a few days before the attack of which she died. She came into hospital in a state of collapse. The vomiting and purging was arrested by the remedies used, but no reaction could be established; she lived about 12 hours after admission.

G. WILKE—Autopsy.—Brain—base of filled with black, thick blood; some points of suppuration along the superior longitudinal sinus, resulting from inflammation of the meningies, pus deposited on the cerebral tissue on either side of sinus; structure of cerebrum and other parts of the brain normal. The blood was chiefly in *the sinuses about the* base.

Thorax—Organs of respiration normal, circulation, normal.

Abdomen—Stomach—Some brownish fluid within it. Bowels—venous congestion (glands of mesentry enlarged.) The intestines contained thin muddy fluid; illium chiefly altered in appearance; kidneys normal; bladder had but little urine in it.

Liver congested; the whole border of a blue-black hue; bile in gall bladder; structure of liver normal.

Peritoneal cavity dry and devoid of serum.

Was comatose for some time before death. External appearance shrunken, bluish and emaciated.

Tom, F. M. C.—Brain—structure healthy, the veins of the meningies highly engorged; sinuses at the base (transverse, lateral petrosal, &c.) charged with about 8 ozs. black, tarry blood.

Thorax—The lungs were normal, some hypostatic congestion; heart normal.

Stomach and bowels contained thin brownish or muddy fluid in large quantities.

Liver engorged with thick black blood; kidneys normal; urinary bladder empty and contracted; some congestion of the illium; cavity of peritoneum dry; abdomen much contracted.

Note—This negro died comatose; he was in collapse when admitted, but soon checked vomiting and purging.

It is shown from this report that up to this date, Oct. 1st, there have been admitted into the hospital 14 cases, of which number 8 have died.

I have treated 14 cases in the city and only one died. Nearly all the cases admitted into the hospital were in a collapse state. Three cases were attacked in the hospital and all three have recovered, though very slowly. The case that died in town was lately from New Orleans, and did not get the treatment for cholera until half hour before death.

The treatment adopted in the hospital was: Injections of green tea and brandy with laudanum.

Tinc opii.
Chloroform,
Aqua Ammonia aa i drach.

Teaspoonful every half hour until relieved. This usually stopped the vomiting and purging. We gave also iii grs. calomel on loaf sugar every three hours. Blisters and mustard according to circumstances. Those that recovered had a tedious and difficult convalescence, and were treated with chlorate potash and quinine internally for several days. This we found an admirable prescription and soon cleaned off the tongue.

YELLOW FEVER.

We have to report that we had during September eight cases of yellow fever. Four were brought from New Orleans and three took it in hospital and one died with black vomit. I give hospital register report made out by Dr. R. H. Hanna. The first cases were from the steamer Hewes, and two patients from them took the disease and one nurse. One case was received from the city, formerly a waiter in the Washington Hotel:

CASES SUSPECTED OF YELLOW FEVER.

No. 1—Michael Hyde; aged 23; native of Scotland; arrived from New Orleans on S. S. Hewes, and admitted into hospital the 24th August; was discharged on 28th. Disease, diagnosed feb. remitt. malig.

No. 2—Chas. Fevre; aged 30; native of New York; arrived from New Orleans per S.S. Hewes, and was admitted into hospital on 24th August; was discharged 29th August. Disease, immediate diagnosis—typho-malarial fever.

No. 3—M. Pafiero; aged 34; native of Italy; arrived from Vera Cruz per schooner Red Jacket; was admitted into hospital on the 9th September, and left on the 12th September. Disease, immediate diagnosis, feb. remitt. malig.

No. 4—S. Jackson; aged 23; native of Providence; arrived from ——— per bark Jason; was admitted into hospital on 11th Sept., and discharged 24th Sept. Disease, immediate diagnosis—suspected yellow fever.

No. 5—John Dunn; aged 28; native of Ireland; laborer; from city; admitted into hospital on 14th Sept. (on hand). Immediate diagnosis—congestive fever (typho-malarial.)

No. 6—Jerry Sullivan; aged 24; native of Boston; arrived from New Orleans per S.S. Texas; was admitted into hospital on 23d Sept. (on hand). Immediate diagnosis—congestive fever. (Had been discharged 10 days previous from the ward where were the suspected cases of yellow fever.)

No. 7—Thos Summer; aged 24; native of Canada; admitted into hospital on 4th August with febris intermittens; recovered, and on the 20th Sept. relapsed with high fever. Immediate diagnosis—suspected and subsequently confirmed as yellow fever. [This man was very yellow, suffered from severe hæmorrhages. Urine did not stain his linen or color paper dipped into it of that yellow color like jaundice. This I think a good diagnostic symptom. He perfectly recovered.]

No. 8—Harrison Otis; aged 47; native of Canada; admitted into hospital on 17th July with phthisis; got suddenly worse on 20th Sept., and died on 24th Sept. Vomited the black matter peculiar to yellow fever—autopsy 12 hours after death.

Chest.—Lungs atrophied, filled with tubercles and adhered firmly to parieteis of thorax; *heart*, normal; abdomen—stomach pale and blood-less, filled with the black, coffee-grounds-like matter, also the whole intestinal canal; *liver*, gray, softened, yielding readily to efforts to tear it with the fingers—also *anemic*; bile in gall bladder; kidneys not examined; urinary bladder contained about half-pint urine; no discoloration of the skin; emaciation great of whole body; considerable serous effusion in abdominal cavity. Diagnosed—positive yellow fever.

These last two men were both taken same day, 20th Sept.

We have had a great deal of dengue this summer in the city. Many cases attended with the peculiar rash. We only call these cases dengue that have the rash, preferring to call those that are free from it ephemeral fever. Very little treatment is necessary. Lemon acid drink. Aconite when fever is very high, and morphia when there is much fever. Avoid exposure to changes of temperature.

FEBRIS REMITTENS—REMITTENT FEVER.

We have had a great many severe cases of this disease in the Island City Hospital, attended in most cases with delirium, with typhoid tongue. We used principally the following:

Hydr. chl, nitis,
Opii. et ipecac pulveris,
Quinine sulphatis ad ix grs.
F. chatas No. 3.

One every two hours, and when delirium set up, calomel and loaf-sugar put on the tongue and washed down with water; blister to nape of neck, and blister over stomach, &c. We were pre-eminently successful.

Letter from Dr. Morrill.

NEW YORK, September 22d, 1866.

GREENSVILLE DOWELL, M. D.

Dear Sir: It still appears uncertain whether any of the doubtful points in regard to the cholera pestilence will be solved by observations upon the epidemic now prevailing. The health officers of this city depended at first upon quarantine, and gave repeated assurances that by a strict enforcement of the laws the city could be protected, boasting, indeed, that the cholera had been "anchored in the bay." But while the most stringent prohibitions were in force, the disease made its appearance in various parts of the city, remote from one another, and without any one being able to tell whence it came. In all that relates to foreign commerce quarantine was still in force, while the vessels which ply between the city and the various towns and settlements on the Sound, on the Hudson River, and on the Atlantic coast, both North and South of us, and the various railroads, have been conveying hundreds of thousands of people into uninfected places, without a word being said about quarantine for the protection of such places.

Great efforts have been made to arrest the disease by means of disinfection but with the usual want of success. Cases of cholera still continue to occur in those portions of the city where it first appeared, and just where it prevailed most in former visitations of the disease. A general cleaning up has been pursued with vigor and zeal, and the olfactories of many thousands have been painfully assailed by the stench of old privies emptied of their contents during the small hours of the night, without arresting the disease where it prevailed or producing it where it had not appeared. Driven from my bed by the odor of this proceeding in my neighborhood, I was curious to inquire how many of the scavengers thus employed had been attacked by the disease, and was assured that all had escaped, and that it was not considered an unwholesome employment by any who are engaged in it.

The butchers have been persistently annoyed by the Board of Health on account of their slaughter-house nuisances, and they are now to be driven from the city, to the relief of many who have a repugnance to offensive odors, but the butchers boast that theirs is the most healthful occupation in the world, that no one engaged in the slaughter-houses has yet had cholera, and that no portions of the city are more healthy than those which are subjected to the effluvia of their works. The fat-boilers, glue-makers and tanners make the same declarations in regard to their several trades, and point to their employees as specimens of robust health. But the rag merchants incur the censure of every body. Their wares are supposed to bring infection from abroad, and to disseminate it at home; but in visiting the paper mills of New England, which are supplied with these rags by the hundred tons, I find no cholera or other disease among the employees, some of whom in every mill are steeped in the dirt of these rags to the very eyes.

A favorite theory now is, that cholera is propagated by the influence of the dejections from the bowels of those who have the disease, but as these are freely handled and disposed of by nurses and physicians without injury, it could only be supposed they became infectious by delay and decomposition, thus ignoring the theory of the cholera germ escaping from the body, and placing the doctrine on the basis of the agency of decomposition in general. Still, there is the difficulty of cases arising in localities where there could have been no such deposits of cholera stools, of these deposits largely made without producing the disease, and the rapid subsidence of the disease where it has prevailed, in spite of these deposits of fecal matter, which abound every where.

In regard to treatment it may be remarked, that it is as much diversified as ever. Many specific remedies are in use, and the practice of physicians greatly differs, but it cannot be denied that failure is the rule and success the exception. Diarrhœa, and probably choleric diarrhœa, is cured, and sometimes by very simple means, but cholera is almost uniformly fatal. Physicians are chary of information in regard to their plans of treatment and the results, and each one is left to adopt his own course without reference to the experience of others. In one of the hospitals I was informed that the opium treatment had been tried and abandoned. The few cases of choleric diarrhœa which have fallen into my hands, have been cured by chloroform internally in hypnotic doses, and strychnine in doses of 1-12 to ⅛ grs. each; citric acid being used as a beverage. I have had no opportunity to try this treatment in collapse.

It can scarcely be doubted that the disease has prevailed here to a greater extent than is indicated by the official reports. The Board of Health strangely requires that every physician shall report his cases upon his first visit, without reference to the well known fact that the disease cannot be diagnosticated until the distinctive symptoms of cholera appear. Consequently the report is apt to be delayed, and when these symptoms do appear, the case cannot then be reported without incurring the penalty. This accounts, in a measure, for the increase in the fatal cases of diarrhœa, dysentery, cholera morbus, and cholera infantum. Probably in all cities the mortality from epidemic diseases is greater than is shown by the official reports.

Yours, very truly,

A. P. MORRILL, M. D.

[I insert the following letter from Prof. Hamilton on the hygenic treatment of cholera. It deserves close attention. Much can be done in the way of prevention, and by the plan suggested it may, at all times, be stopped.]

No. 64, Madison Avenue,
New York, Friday, Aug. 10, 1866.

E. Harris, M.D., *Corresponding Secretary M. B. H.*:

Sir:—The first case of cholera occurred in the Workhouse on the 28th July, the last case on the 6th August. The epidemic continued, therefore, nine days, during which period, of about 800 inmates, 123 died. I do not mention one case reported on the 8th August, because, as I understand, the person was admitted only the night before; I do not think the disease was contracted in the Workhouse.

You know the building very well. It is admirably constructed for the purposes for which it is designed, and, so far as my observation extends, it is always perfectly clean. Until now, the inmates have been as healthy as this class of people are usually found to be.

The explanation of the rapid propagation and fatality of the disease after it once had gained admission was believed to be mainly confinement and crowding. It was observed that the cholera was for several days exclusively among the women. The women had the smallest apartments, were most crowded in their cells, and, with few exceptions, were employed within the building in close contact with each other during the day. The men were employed mostly in the quarries, out-doors.

On Wednesday, when the epidemic was at its height, the 1st August, I gave my pledge to the Board of Commissioners and to Mr. Schultz, President of the Board of Health, in your presence, that I would drive the cholera from the Workhouse in from three to five days. I said this in no spirit of boasting, but in simple reliance on the well known and established laws of hygiene. The Commissioners executed literally and promptly every order which was given by the Committee.

The epidemic began to decline from the day they were fully carried out, and on Monday last the pledge was redeemed. The following is a summary of the sanitary means adopted:

The inmates were distributed as far as the vacant places in the building would permit; the cell doors were left open at night; the night buckets were supplied with disinfectants and left outside; the women's cooking rooms were converted into hospital wards, and the women were kept out of doors from morning until night; corn-meal and molasses were taken from the diet table; coffee, tea and vegetables were added; at night each inmate was required to take, whiskey one ounce, water three ounces, tincture of capsicum fifteen drops. [These people are our city vagrants, and probably are habitually intemperate.] A variety of disinfectants were employed freely and constantly in every vessel and closet which received the excreta; even the excreta from the stomach were disinfected immediately after they were received into a vessel or fell upon the floor; stoves were placed in each hospital ward to insure a draught; all windows were kept open day and night; the clothing taken from cholera patients was sent directly to the boilers; a ward was established for patients with the diarrhœa, and the value of this measure is shown by the fact that of the large number received into this ward only one died. It was difficult, however, to persuade these poor creatures to report themselves at this stage of the disease.

From the Workhouse the cholera has spread to every other building on the island, except, I think, to the Madhouse, the pavilion attached to the Male Almshouse, and the Fever Pavilion. In none, however, has it proved so fatal as in the Workhouse.

The same sanitary measures have been adopted, with slight modifications, in each department, but they cannot be applied with so much vigor to the Lunatic Asylum, the Almshouse, or the General Hospital. These buildings are all crowded, and the inmates cannot be seated or turned out of doors; consequently, the cholera remains among them, but in a greatly mitigated form. In the Penitentiary it remained but two days.

Connected with the Almshouses are two well constructed pavilions, lying side by side, separated by only a few feet and a brick wall ten or twelve feet high. One is occupied by feeble old men, and the other by the same class of old women. The only point of difference which I can discover is that at the time of the outbreak of the cholera, the male pavilion contained only sixty-two persons, while the female contained ninety-nine. In the first there has not been one case of cholera; in the second thirty-one have died.

Of fourteen house-physicians and surgeons employed in these several buildings, some of whom have been in constant attendance upon the sick, not one has suffered from the epidemic.

Very respectfully yours,

(Signed) FRANK H. HAMILTON, M. D.

[We receive many letters similar to the following. We hope the gentlemen will carry out their intentions:]

TYLER, TEXAS, 21st October, 1866.

PROF. G. DOWELL, Galveston:

Respected Sir,—I have with great pleasure read the Nos. of your Journal. You will, in Texas medical history, be classed as the *first* originator of a Journal to give the reflex of the medical mind of the State. I wish you all success, and in a few days I will send you the *needful* as the price of your Journal. Doctor, a great reform is needed, and it must be with the present to inaugurate that. No longer under the great *revolutionary* changes which have been wrought in politics and law, as a science, can medicine afford to lag? Ours is peculiarly a science and art known only to its *enlightened* members, and from them must it improve. All great steps forward must be at first slow, but never was a wider field opened for advancement than is now presented in our State. The Soule University Medical Department is the first to inaugurate Medical instruction in the State. God speed you in the good work, and may you be the means of elevating the professional standard of the State. Galveston is destined, with Houston, to be the great cities of the southwest coast, and, like other great depots, need all classes of business, and in none will our *time-honored profession* flourish more. The schools of Europe and the North cannot hold us spell-bound; and while at present we inevitably look to them, the proper industry, talent and organization will develop our State, and particularly its great cities, as the reflex of learning in the varied professions. The history of the world demonstrates this. The time is now approaching for this to be done; and you, sir, in your enterprise will realize to the State of Texas what Hay of Philadelphia has realized for the United States. Doctor, go ahead and build up, not only your Journal, but the school to which you are attached. Deem it not presumption in me to write to you thus; for, if God spare me, I intend in some way or other to be a co-laborer with you. I have the pleasure of being personally known to your profession of surgery, obstetrics and chemistry, and to you from your reports to the current medical literature. I have in preparation some essays upon fever, dysentery, malarial and scorbutus, (the result of observation while a surgeon in the C. S. A., and private practice,) which I hope to give to the profession through your Journal. I intend to discuss fully and elaborately the difference (so far as symptomatology) and based, too, upon a few post-mortems, the character of our continued fever, and think there is no material difference between them and the continued fever of Europe and the Northern part of the United States, save where we reach properly the "isothermal line," developing malaria. In a recent publication, "Woodward on the Camp diseases of the U. S. Armies," this subject is broached but not fully developed. I also intend to prepare some essays upon "typhoid pneumonia," in which I contend that the lung inflammation is nothing but a lesion resulting from the profound impression upon that organ during an algid fever, resulting from malaria, quickly recognized and readily relieved by chloroform and strychnia, followed by quinine. The true pathology of the disease has been glanced at by Dickinson and Merrill.

Wishing you success,

I have the honor to be,

Your obedient servant,

U. G. M. WALKER.

PROF. G. DOWELL,
Prof. Anatomy Galveston Medical College.

HOMER, TEXAS, October 18, 1866.

GREENSVILLE DOWELL, M. D.:

Sir,—I have just been handed the April, July and August Nos. of your valuable Medical Journal by S. H. Parsons, (our P. M.), also your letter requesting that he hand it to his "family physician, and ask him in return to send a list of all the practicing physicians in his county."

I herewith send you the list requested. There are but few physicians in this county.

* * * * * * * * * * * *

Dear sir, I have not had an opportunity of fully examining your Journal. But so far as I have, in my opinion, it seems admirably adapted to the practitioner of our Southern country. We feel constantly the want of a Journal that will meet the exigencies of our climate. We want the dormant energies of members of the "healing art" to arouse themselves and place the standard of the profession to a higher grade.

There are many eminent men in Texas who would be entirely competent to the task of making a Medical Journal not only useful but highly interesting even in a literary point.

There are, no doubt, diseases that are entirely peculiar to Texas—or rather symptoms of diseases that are peculiar—and probably the former—and why not physicians of this country give the profession the advantage of their investigations.

Of all professions in the world, that of medicine should be the least selfish—every member of it should be free to place his knowledge of the healing art at the disposal of the profession.

In reading over the report of "The Meetings of the Sections," upon the subject of diphtheria, a subject that a country physician has but few opportunities of investigating; yet occasionally a case will present itself, I was well pleased at the thoroughness of this treatment. I have had but four cases in eight years practice in Texas. My first case proved fatal; the other three recovered. The successful cases I treated as follows:—Dissolved 30 grs. nitric arg. in 1 drah. rain water, and saturated a piece of sponge about the size of a partridge egg, fastened to the end of a probang; pushed it down the throat as far as I readily could, and applied a plaster of common tar mixed with fl. sulphur, and boiled nearly to the consistency of shoemaker's wax, to the throat so as to cover the entire front portion; as soon as the patient could swallow, administered a full dose of ol. ricini; nourish the patient with good thick broths, using freely brandy. I found the disease to yield quite readily to the above treatment.

I shall not at present subscribe for your Journal, as I shall probably remove from this portion of the country, but have not yet determined to what point I may stop at. But you have my heartfelt wishes for your success, and I hope it may be taken by every physician in Texas.

I am, with much respect,

Yours fraternally,

L. C. KIRKPATRICK.

PRIZE ESSAY.

ON THE PATHOLOGY OF JAUNDICE.

During the past year, I have had the opportunity to examine a number of cases of jaundice. Some of the cases came under observation in my duties as curator and microscopist to the ——— hospital; the others I saw through the kindness of the physicians in attendance, and for whom I made the *post-mortem* and microscopical examination.—Drs. A. N. Bell, J. T. Conklin, De Witt C. Enos, Robert Ormiston, Jr., J. M. Minor, D. S. Landon, Jas. Crane, H. S. Smith, and others were present at several of these examinations, and are assured of their accuracy.

The examinations were made with especial reference to the cause of the yellow coloration of the skin and tissues.

As the facts and conclusions gathered from them differ from the generally accepted views, and appear to throw some light upon this difficult subject, I beg leave to present them for the consideration of the profession.

The cases examined are eleven in number; their histories, *post-mortem*, and microscopical examinations are as follows:—

Case I. *A Case of Black Vomit.*—Presented to the King's County Medical Society, by J. T. Conkling, M. D.

" April 21st. A seaman, æt. 19, left New Brunswick in October last for Kingston, Jamaica. While there he had, he said, bilious fever, and was confined to the hospital several weeks. He was on the island two weeks longer in a boarding house, where his food consisted only of bread and salt fish. On the 1st of February he left in the barque John Bolton for Philadelphia, and though very feeble, worked his passage during a voyage of eighteen days. From Philadelphia he came directly to this city, arriving here on Thursday morning, Feb. 19th. He partook of a breakfast of beefsteak and coffee, and at dinner, of corned beef and cabbage. In the evening he vomited, and had a restless night. His sister said she gave him on Friday salts and cream of tartar, which produced vomiting and purging. Friday evening, at seven o'clock, he commenced vomiting large quantities of dark fluid matter. I first saw him on Saturday, at three o'clock. He was suffering from severe pain in the bowels ; had intense thirst ; would drink a few swallows of water, and immediately vomit a pint of more of black fluid, which excoriated his throat and had a very acid odor ; his pulse was natural ; eye clear ; and skin normal in color and temperature. His bladder was empty, and he told me he had passed urine the evening before. The vomiting continued during the day and following night. His mind remained clear. There was a constant restlessness and shifting of position in search of ease. There was no evacuation of urine or feces after I saw him. His strength failed gradually, and he died at nine o'clock on Sunday morning, thirty-eight hours after the first occurrence of the dark vomited matter."

The autopsy was made by myself seven hours after death, in the presence of Drs. Conkling, Enos and Bell. Body well formed but emaciated ; not yet cold ; rigor mortis not well pronounced ; surface tinged, livid ; frothy mucus filling the nostrils. The pectoral and abdominal muscles were of a very dark color, almost purple.

Thorax.—Old adhesions at the posterior part of the left lung. Intense sanguineous engorgement of both lungs. Incisions made in any part of the lungs gave rise to an abundant flow of very dark-colored blood. The pericardium contained about an ounce of yellow serum. The heart full sized, firm, veins upon the surface distended with blood ; cut surface presented a darker hue than usual ; intensely black clots in right ventricle and auricle ; a small light-colored clot in left ventricle and a small black clot in left auricle ; slight thickening of the semilunar valves of the aorta ; otherwise valves perfect.

Abdomen.—Liver very dark, between a purple and chocolate color ; appeared normal in size ; borders sharp and well defined ; a few patches upon the anterior surface of a lighter color than the rest of the organ, having a slight yellow tint. The organ was firm ; its cut surface smooth, and contrary to opinion based upon its dark color, it was dry, little or no blood making its appearance in the course of the knife. Its ducts were stained with yellow bile. The gall bladder contained dark bile.

Stomach very large, extending down to the umbilicus and into right lumbar region ; it contained two quarts of black fluid similar to that vomited by the patient, of very acid odor ; the mucous membrane near the pylorus was much congested and bared of mucous ; the other portions were covered with thick mucus mixed with dirty black material like the vomita.

Duodenum.—Filled with a black fluid ; mucous membrane dark colored, not congested ; intestines at some points much congested ; they contained but little fecal matter, of a yellow color, with only slight odor. Peyer's patches were healthy.

The *spleen* was twice its normal size, of a dirty dark color, and becoming diffluent.

The *kidneys* were congested, nearly normal in size, firm ; their capsules were firmly adherent ; cut surface smooth, dark colored, and soon covered by a layer of dark blood. The *supra-renal capsules* were of a dark color, their corticle and medullary substances not well defined. The head of the *pancreas* was a little enlarged, otherwise normal. The *bladder* contained about four ounces of reddish urine. The *bloodvessels* contained but little blood, and that was of a dark color.

Microscopical and Chemical Examinations.—The black vomit was very acid. Seen through the microscope with a quarter inch objective, it was composed of striated muscular fibres (ingesta), altered starch corpuscles, and numerous sarcinæ ventriculi, the whole field being covered with black amorphous granules, varying in size, some of them aggregated together; many of them, on changing the illumination and focus, transmitted a deep red light. They were not acted upon when treated with acetic acid, but were dissolved by ammonia and liquor potassæ, giving a deep red color. They were considered to be granules hæmatoidine.

Liver.—Its cells were normal, with the usual amount of fat. A few cells were found in process of fatty degeneration; these were rare. *Amorphous granules*, similar to those found in the black vomit, were everywhere present, but less abundant than in the vomita. In some places the granules were very fine, and gave to the field a yellowish tint. A few crystals were found, probably the so-called blood crystals.

Heart.—Muscular fibres perfect; granules of hæmatoidine present but not abundant.

Kidneys.—A few of the tubes were partially denuded of their epithelium; abundant granules of hæmatoidine; otherwise healthy.

Spleen considerably disintegrated; abundant granules of hæmatoidine; blood corpuscles much enlarged and broken down, being swollen, oblong, irregular and granular.

Pancreas healthy; contained a very few granules of hæmatoidine.

Supra-renal capsules apparently healthy; granules of hæmatoidine more abundant than in pancreas. Urine albuminous; it contained scales of epithelium from bladder, ureters, and kidney; urate of ammonia, blood corpuscles, and granules of hæmatoidine.

This case was not strictly one of jaundice, for there was no yellow color of the skin or conjunctivæ. There was, however, a dark purplish discoloration of the skin and all the tissues noticed after death. This dark discoloration was due to the abundant granules of hæmatoidine, as was shown by the microscopical examination; the shade of color depending in a measure upon the size, depth of color, and aggregation of the granules—the very fine ones giving a yellowish tint to the field of the microscope.

It is very probable that, had the patient lived longer, the yellow color would have appeared in the same manner, as we find changes of color taking place around ecchymotic spots and old extravasations; the tissues assuming a variety of colors during the decomposition of the hæmatine, and the oxidation of the resulting hæmatoidine—the shade varying from perfect blackness to a light yellow.

In the discussion of this case before the King's County Medical Society, Dr. Enos regarded it as a case of bilious remittent fever.

Dr. Bell believed it to be a case of yellow fever, and attributed the absence of yellowness of the skin to the rapidly fatal character of the case, stating that in those cases which are fatal during the period of excitement, yellowness of the skin is commonly absent, or does not occur till after death.

CASE II. John Wilson, æt. 25 years ; sailor on board ship Swaomie from Aspinwall ; admitted July 14th, 1863, to —— Hospital, service of Dr. D. S. Landon.

Symptoms.—General pyrexia ; vomiting (the vomited matter he said was of a blue color) ; pain in the back, head, abdomen, and limbs ; mental and bodily prostration ; great irritability of stomach ; black vomit ; tongue deep red at the tip and edges, loaded and dark in the centre ; pulse slow ; alvine dejection of a tarry appearance. There was also a suppurating wound over the left orbit received while on shipboard some two weeks previous.

July 5th.—Patient failing rapidly ; seen in consultation by Drs. Landon, Bell, Crane, and Smith, who pronounced it to be a well marked case of yellow fever.

July 16th.—Died.

Autopsy three hours after death—Body well formed, emaciated ; rigor mortis well marked ; surface yellow ; some patches resembling ecchymosis ; conjunctivæ yellow ; blood upon the lips ; thighs and nates stained with dark blood passed by stool ; wound about one inch in extent upon the forehead, discharging pus ; bone beneath bared of periosteum ; left eye swollen and ecchymosed.

Brain.—On removing the calvaria the surface of the dura mater was bathed with pus for a space of about two inches, at a point corresponding with the external wound ; pus between the dura mater and arachnoid, and upon the surface of the brain in about the same extent of surface, but in small quantity. On cutting the optic nerve of the left side pus escaped from the orbit. Small amount of serum in lateral ventricles ; the meningeal inflammation did not extend into the substance of the brain. The blood, which escaped on cutting the sinuses, coagulated immediately.

Thorax.—Pectoral muscles very dark-colored ; a few ounces of bloody serum in the pleural cavity ; lungs free from adhesions, contained scattered tuberculous masses undergoing softening.

Heart.—The pericardium contained from three to four ounces of clear serum ; weight of heart 13 oz. ; veins upon the surface distended with blood. Upon opening the large vessels of the thorax the blood came from them fluid, but coagulated immediately on exposure to the air ; coagulum in the right side of the heart very firm and yellow, filling the cavity ; small coagulum in the left side ; valves normal.

Abdomen.—Muscles very dark colored.

Liver.—Fawn-colored ; weight 4 lbs. 7 oz. ; mottled ; in some places lighter colored than in others, cut surface smooth and dry ; bile-ducts contained small amount of yellow bile ; gall bladder contained black bile.

Spleen.—7½ oz. ; softened.

Kidneys.—7 oz. ; light-colored ; cortical substance increased ; in one of them was a small cyst containing black fluid ; supra-renal capsules large, very firm and dark-colored.

Bladder contained a few drachms of turbid urine; mucous membrane ecchymosed.

Pancreas enlarged.

Stomach contained about twelve oz. of black, sanguineous liquid ; its mucous membrane was congested and ecchymosed. The whole intestinal canal was filled with a black, sanguineous liquid. The small intestine contained a living tapeworm six or seven feet long, the lower portion being broken off. The mucous membrane of the intestines was ecchymosed in some places. There was entire absence of fecal matter.

Microscopical Examination.—The contents of the stomach and intestines were acid, and contained altered blood-corpuscles, and abundant granules of hæmatoidine.

Liver.—Its cells were large, and some of them fatty, but the greater portion presented the appearance of advanced waxy degeneration ; there was abundance of hæmatoidine and a few blood crystals.

Heart.—Granules of hæmatoidine ; muscular fibres undergoing molecular degeneration.

Kidneys.—Fatty ; Granules of hæmatoidine.

Pancreas and supra-renal capsules contained hæmatoidine.

Spleen.—Softened ; abundance of hæmatoidine.

The *skin* and *conjunctiva* contained abundant granules of hæmatoïdine, and seemed to derive their yellow color from the presence of this substance.

Blood.—Some of the corpuscles were found altered and broken down.

CASE III. Mary Smith, æt. 28 years ; stewardess on board steamer Continental from New Orleans ; admittted to —— Hospital Oct. 2d, evening. Service of Dr. A. N. Bell.

Two days before the patient had washed her husband's clothes, which had come from New Orleans in a tightly packed trunk one week previous. Soon after washing the clothes she had a chill.

Symptoms on admission.—Pulse 130 ; skin hot, dry and yellow ; tongue furred and red at the tip and edges ; conjunctivæ yellow ; pain in the left side and back ; cough ; jactitation ; diarrhœa ; feces of a light yellow color. Pneumonia of the lower lobe of the left lung.

Oct. 3d—Urine contains traces of albumen and hæmatoidine.

4th—Urine gave the reaction for bile (?) with nitric acid.

5th—Yellowness of the skin and conjunctivæ increased ; tongue covered with a thick black crust; red at the edges; stools and urine passed involuntarily.

6th—Efforts at vomiting; less restless.

7th—Died at 8½ A.M.

Autopsy 7¾ hours after death.—Body well formed, emaciated; surface yellow; conjunctivæ yellow; patches of ecchymosis on different parts of the body.

Brain.—Normal.

Thorax.—Pneumonia of the middle and lower lobe of the left lung; hepatization.

Heart.—11 oz., flabby; coagula in both sides, that on the right side very black. The blood in the large veins of the thorax coagulated and black.

Abdomen.—*Liver* dark-colored, with yellow patches here and there upon the surface; cut surface dry; bile ducts contained yellow bile; weight of liver 3 lbs. 7 oz.

Kidneys 7½ oz., flabby.

Spleen 10 oz., soft and dark colored.

The *stomach* and *intestines* contained a small quantity of greenish fluid. Intestines congested in some places; the cæcum contained yellow fecal matter.

Microscopical Examination.—*Liver* fatty; abundant granules of hæmatoidine.

Kidneys.—Fatty; hæmatoidine.

Spleen.—Hæmatoidine and altered blood-corpuscles.

Heart contained hæmatoidine, and was undergoing molecular degeneration.

The contents of the *stomach* and *intestines* contained hæmatoidine, and in this respect resembled black vomit.

The *skin* and *conjunctivæ* contained abundant granules of hæmatoidine of lighter shades of color. The color of the skin and conjunctivæ seemed to be due to the presence of this substance. The muscles, connective tissue, &c., all contained granules of hæmatoidine.

Case IV. Jas. Perry, æt. 43 years. On the 17th Oct., 1863, was kicked on the lower jaw by a horse, fracturing the jaw near the symphysis between two incisor teeth.

18th—Admitted to ——— Hospital. Mouth much swollen; breath offensive, smells of alcohol; patient a little restless and wild-looking.

Nov. 1st—Got out of bed last night and chased the nurse about the room with a bottle with intent to kill him.

3d—Complains of pain in the chest; breathing laborious, with quick pulse and high fever. Find dullness and crepitation in the the lower part of the left lung; moans and talks; feels well in the evening.

5th—Got out of bed last night and sat on the floor. 6 o'clock A.M. hemorrhage from the mouth Mouth drawn to the left side. Is comatose. 1 o'clock P.M. died.

Autopsy twelve hours after death—Body well formed; surface yellow, with occasional bluish spots resembling ecchymosis ; conjunctivæ yellow. The inferior maxillary bone was fractured at one-half inch from the symphysis.

Brain.—Normal.

Thorax.—Sero-purulent effusion filling the left pleural cavity ; pneumonia of the lower lobe of the left lung ; extensive melanotic deposit in the same and softened tubercle. Small amount of tubercular deposit in the right lung ; pleura adherent.

Heart.—Weighed 13 oz., waxy appearance.

Liver.—5 lbs. 7½ oz., fatty ; cut surface granular ; light colored.

Kidneys.—7½ and 8 oz., dark colored capsules adherent.

Spleen.—Very dark colored ; firm ; on exposure to the air the dark color disappeared rapidly. The muscles of the abdomen were very dark colored and became lighter on exposure to the air.

Microscopical Examination.—Heart waxy ; liver fatty. The skin and conjunctivæ contained abundance of hæmatoidine. The muscles and other tissues contained hæmatoidine to some extent.

CASE V. Josephine Sleight æt. 42 ; married ; admitted to ——— Hospital November 1st, 1863.

Symptoms—Pain in the right hypochondriac region, and also below the umbilicus ; constipation of long standing ; skin and conjunctivæ yellow. Five weeks ago a tumor appeared in the abdomen in the median line, and extending in the region of the liver. It was movable and appeared to be attached to the left lobe of the liver. The liver was enlarged. Ordered turpentine and castor oil, which brought away lumps of hardened feces.

11th—Bowels moved well this morning, scybalous ; towards evening has severe pain in the abdomen and over the liver. Ordered ext. colocynth. co., ipecac, and ext. nucis vomica, to keep the bowels open ; anodyne at night ; and fomentations to the bowels from time to time. Exacerbations of pain at night, the patient sometimes rolling upon the floor to get relief.

22d—Patient's skin and conjunctivæ of a yellowish-brown color. The urine gave the reaction for bile (?) with nitric acid test ; examined with Pettenkofer's test, the result was negative.

24th—Bowels moved, feces clay-colored.

25th—died.

Autopsy twnety-four hours after death—Body much emaciated ; surface yellow ; conjunctivæ yellow.

Brain.—Scalp and meninges very yellow ; a small quantity of serum beneath the arachnoid and in the lateral ventricles ; otherwise brain normal.

Thorax.—Lungs normal. *Heart*, small and flabby. In the region of the thymus gland, the trachea was surrounded by a firm nodulated tumor about three inches in diameter, of a cancerous appearance.

Abdomen.—Liver large, firm and occupied by a cancerous deposit, most extensive in its anterior and superior surface ; gall bladder distended to four or five times its normal size ; and lying parallel with the ascending colon; it contained twenty-three gall stones; there was a white patch upon its surface (external) about one inch in extent, the result of previous inflammatory action. The mesentery was occupied by a nodulated cancerous tumor firmly adherent to the vertebral column, surrounding the aorta, and compressing the duct of the gall bladder. The pancreas was involved in the disease to such an extent as to be blended with the tumor. The cancerous mass weighed 4 lbs. 12 oz. On cutting the liver a deposit of similar nature was found in its interior; in some places it was of a dark brown or red color. Kidneys and spleen normal. Intestines not involved.

Microscopical Examination.—The tumors were found to be of a cancerous nature, exhibiting the cells usual to the encephaloid cancer. The reddish patches in the liver contained a large number of blood crystals and granules of hæmatoidine. The skin contained abundance of hæmatoidine.

Case VI. Coroner's inquest. Female, about twenty-five years of age. Autopsy Dec. 13th, 1863, one month after death. The body had been disinterred on account of suspicion of poisoning. Body well formed, and in a good state of preservation. Abdomen enlarged. Surface yellow; conjunctivæ yellow; the shade of color on the face and thighs was of a beautiful orange tint. There was a dark discoloration about the neck, pubes and elbows, the result of decomposition. The pleural cavity contained a large amount of bloody serum; lungs normal; heart small, flabby and empty. Abdomen contained a large quantity of thick, partly coagulated blood. Liver of a yellowish color, normal in size. Gall bladder contained six or seven gall stones of triangular shape and black color. Gall ducts unobstructed. Kidneys normal. Spleen soft. Intestines very dark colored from decomposition. Stomach distended with gas; uterus enlarged; posterior to it in the cul-de-sac was a mass of coagulated blood attached to the left broad ligament, and on tracing it up it was found to be a part of a coagulum formed in the Fallopian tube and broad ligament; a similar condition of less extent existed upon the opposite side. On the right side the swelling of the Fallopian tube looked as if there might have been an extra-uterine pregnancy. It was supposed that the woman came to her death by the escape of blood into the peritoneal cavity from the rupture of these tumors.

Microscopical Examination—The skin, conjunctivæ and some of the tissues contained hæmatoidine; in the skin it was very abundant.

Case VII. Johanna Thorn æt. 40. Admitted to —— Hospital Dec. 11, 1863. About eight months ago her menses stopped; before that time she had been healthy. Her habits were very intemperate. Has had a cough for three months. Two months ago her abdomen began to swell, commencing at the lower part of the obdomen in the median line. When admitted the skin and conjunctivæ were very yellow and continue to be so. Bronchial respiration at the apices of both lungs; respiration embarrassed. Diagnosis, cirrhosis of liver.

12th—Bowels moved freely last night and this morning. Ordered squill, digitalis, and blue mass.

14th—Bowels quiet; expectorates considerable; sputa tinged with blood; does not sleep well; respirations embarrassed.

Jan. 1st, 1864—Abdomen softer and less distended. Makes from xvi—xx drach. of urine in twenty-four hours; has from six to eleven stools in twenty-four hours. Sleeps better than she did. Urine dark colored, and gives the reaction for the coloring matter of the bile with nitric acid, but failed to react with Pettenkofer's test. Examined microscopically the urine containtd abundance of urates and some scales of epithelium stained yellow.

20th—The patient is now more comfortable; the skin is less yellow, and the urine lighter colored. The patient is still under observation.

Case VIII. (Private patient of Dr. De Witt C. Enos.)—Mr. B—, æt 48; merchant; health generally good; he has been affected with deafness for years.

Dec. 25th, 1863—He began to complain of not feeling well, was weak, and had undefined, but unpleasant feelings in his head. Does not sleep well; has itching of the skin. Has had eczema on the right arm for years. Dr. Enos saw him.

Jan. 1, 1864—He was very restless at night; the itching was severe; no apetite; tongue a little furred, white; bowels torpid; urine abundant, high colored and acid. Treated with nitric acid, gave reaction for the coloring matter of the bile. Pettenkofer's test failed to react.

He had pain in various parts of the body. Ordered Rochelle salts till the urine was less acid. In a few days the skin became yellowish, and the conjunctivæ quite icterode. He was purged freely with pil. hydrarg. and sulph. magnes., after which he took an infusion of juniper berries with gin. He soon began to feel better, the jaundiced hue to pass away, and in three weeks Dr. Enos ceased to visit him. His eye, however, was still a little icterode.

Case IX. (Private patient of Dr. Enos.)—Mr. B———, æt. 23. Has felt unwell for some weeks. Has had some dizziness and unpleasant sensation in the head. Bowels torpid; feces dark colored; urine abundant, very high colored and acid, and with nitric acid test gave the reaction for the coloring matters of the bile. With Pettenkofer's test the reaction was doubtful. Skin and conjunctivæ very yellow. A microscopical examination of the urine showed a large number of casts from the tubes of the kidney; they were stained yellow. This patient was treated like the last case. He was confined to his bed about two weeks. He convalesced rapidly, the yellow hue passing from the skin first, and lingering longer in the conjunctivæ. As the jaundiced hue passed away from the skin, and the dark color disappeared from the urine, the casts of the tubuli uriniferi dissappeared also.

Case X. (Private patient of Dr. Enos.)—Mr. B————, æt. 33; health generally good; but for the last two or three weeks has not felt as well as usual. On the 28th of January he had a chill, pain in the head and side. Dr. Enos was called the day after the attack; the patient had passed a sleepless night; pulse 112; respirations 24; breathing interrupted; pain in the head; tongue coated; bad taste in the mouth; cough; expectoration tinged with blood at first, next day prune juice colored, and subsequently greenish. Crepitation at the lower part of the right lung, at first resonant, but subsequently dull on percussion as far up as the ninth rib; tenderness in the region of the liver; nausea and vomiting; hepatic dulness four and a half inches; bowels regular; urine high colored and scanty.

On the 29th, second day after the attack, the patient became icterode; this increased until to-day (Feb. 4th). It is now improving. The conjunctivæ remain the same. The patient is now convalescing. The urine continues of a dark color; treated with nitric acid, gave the reaction for the coloring matter of the bile. Treatment same as in the last two cases.

Case XI. (Patient of Drs. Clark and Enos.)—*Albuminuria, puerperal convulsions, jaundice* and *death.*

A lady, aged thirty years; eight months pregnant and in labor; was attacked with convulsions; chloroform was administered, and the child delivered; convulsions passed off; the patient was then conscious for seventy-eight hours, and then another convulsion occurred; pain in the head; pulse 130–140; patient became comatose and died. The urine contained albumen before delivery; after delivery there was only a trace of albumen. The patient was not seen for twelve hours before death; she became jaundiced during that time, but the exact time could not be determined.

The *post-mortem* examination was made by Dr. Enos. The surface was yellow; conjunctivæ yellow; brain not examined; lungs normal; heart fatty; liver fawn-colored, large and fatty; kidneys large and fatty. The gall bladder contained a moderate quantity of bile.

Microscopical Examination (by myself).—The liver was exceedingly fatty; its cells were filled with fat globules, and many of them entirely destroyed. The heart and kidneys were fatty. The skin contained abundance of hæmatoidine.

In connection with these cases of jaundice I have made a number of examinations of extensive discoloration of the integument and other tissues from bruises and old extravasations. These, examined side by side with specimens of jaundiced tissues, presented a precisely similar appearance under the microscope, so much so that a portion of jaundiced tissue might readily be mistaken for that of an ecchymosis in its stage of yellow discoloration.

Jaundice or Icterus is a comprehensive term, which has been applied to a group of diseases, the prominent symptom of which is yellowness of the skin, of the conjunctivæ, and of some of the secretions, especially the urine. It has been attributed to various causes, but chiefly to some obstruction to the flow of bile into the intestines. It has been supposed that the functional activity of the liver is not interrupted, and that the accumulating bile is absorbed into the circulation, being afterwards partly deposited in the skin and partly excreted by the kidneys.

Frerichs has proposed to account for the production of jaundice in those cases where no mechanical obstruction of the hepatic ducts could be supposed to exist by presuming that the consumption of the biliary acids which are re-absorbed into the circulation, either from the intestines or from the liver itself, might be checked at some stage of its progress. Instead of being ultimately converted into urinary coloring matters, these acids would only reach the transitional form of bile pigment, the gradual accumulation of which would tinge both the tissues and the secretions. The chief support of this view was derived from the fact that coloring matters having the properties of bile pigment were produced artificially, and the biliary acids were injected into the blood of dogs, when bile coloring matters, but no bile acids, appeared in the urine. A paper by Dr. Kuhne, contesting the validity of Frerichs' experiments, was published in Virchow's Archiv., vol. xiv., Sept. 1858, an abstract of which, by Geo. Scott, appeared in Beale's Archiv., vol. i.; whence I have extracted the references here made to the experiments of Dr. Kuhne.

Kuhne concludes that in icterus from closed ducts the urine always contains biliary acids, whilst normal urine never affords any evidence of their presence.

Dr. Folwarczny has published the results of a series of experiments contradictory to this conclusion of Kuhne's. Dr. Neukomm has made a more extended series of experiments. He examined icteric urine, obtained from a patient suffering from closure of the ductus communis choledochus, which on being treated with nitric acid, yielded the reaction of the bile pigment. Pettenkofer's test gave no evidence of the presence of a biliary acid. Neukomm also injected the biliary acids into the veins of dogs, and in the majority of cases biliary coloring matter was found in the urine, but no biliary acids. In two instances, however, the biliary acids were detected in small quantity. Neukomm believes these facts seem to indicate a conversion of the biliary acids into coloring matter in the course of the circulation. But he maintains that the exceptional cases should receive due consdieration.

Chemists and physiologists are at variance in regard to the question of the presence or absence of bile acids in the urine.

The results of examinations for the detection of bile substances in the blood and urine are very contradictory. Lehmann, Sherer, and Gorup-Besanez consider the existence of bile acids in the urine as an extremely rare occurrence, and that it is just the deeply colored urine of icteric patients which contains no bile acids.

Kuhne made a series of experiments proving that soda salts of glycocholic, cholalic, and choloidic acid, after being injected into the veins, again leave the bodies of the animals unchanged through the kidneys.

Kuhne has found that cholalic acid, choloidic acid, and dyslysin existed normally in the dogs' feces, and in such large quantity that he concludes that almost none of the bile acids are reabsorbed from the intestines, but that they pass off for the most part in the excrements.

Liebig, and Bidder and Schmidt, on the contrary, affirm that, for the most part, the elements of the bile re-enter the blood after passing into the intestine, the coloring matter, however, being finally excreted with the feces.

Frerichs and Stœdeler affirm that the bile coloring matter and bile acids never appear together in the urine; that, on the other hand, sometimes traces of the biliary acids can be detected in urine having no jaundiced hue; from this they concluded that there is some connection in the origin of these two substances.

Frerichs injected into the veins of a dog ox bile freed from mucus and coloring matter. The animal's urine afterwards secreted was very deeply colored, and chemical analysis showed that in reality bile coloring matter was present in the urine as a sediment. Substances giving Pettenkofer's reaction were not detected. Hence Frerichs concludes that so soon as the bile acids arrived in the blood they were changed into bile coloring matter.

Kuhne, however, does not agree with this theory of Frerichs. He states that in icterus caused by closure of the ductus communis choledochus, the urine contains always bile coloring matter.

Kuhne examined five litres of normal urine for bile acids, after Hoppe's method, but did not detect any; he therefore concludes that the presence of bile acids is the peculiarity of only icteric urine. Thus Khune's results contradict completely those of Frerichs, who asserts that after the injection into the blood of glycocholate of soda, or any other pure bile acid salt, bile coloring matter appears in the urine, while unchanged bile acids are never to be found; and that icteric urine is that least likely to contain bile acids. In the experiments of Kuhne, after the injection of bile substances into the blood, albumen appeared in the urine, and there was sometimes hæmaturia. This was observed, also, in the experiments of Frerichs; hæmaturia occurred seventeen times out of twenty-nine injections, a fact which is worthy of remark.

From the experiments of Khune it appears that there is an invariable appearance of bile coloring matter in the urine after the injection of colorless bile acids into the blood. The occurrence of hæmaturia has been explained by the fact discovered by Huhnefeld, Plattner, and Simon, viz.: that the bile acids and their salts have the peculiar property of dissolving the blood corpuscles. The blood corpuscles of mammalia and birds are easily dissolved by bile and bile acids. Khune, therefore, attributes the bile coloring matter in the urine, after the injection of colorless bile acids into the blood, to the hæmatine set free by the solution of a certain number of the blood corpuscles.

Kuhne states that, if a bile acid salt be injected into a vein, soon afterwards free coloring matter and bile coloring matter appear in the blood.

Kuhne considers that the fact of the solution of the blood corpuscles in the living body by bile acid salts, and the formation of bile-coloring matter out of blood coloring matter, gives support to the theory that a not inconsiderable amount of blood corpuscles is destroyed in the liver, and that the coloring matter found in the bile represents the changed product of the hæmatine which had been contained in this portion of the blood corpuscles dissolved.

Kuhne tied the ductus communis choledochus of a dog so as to prevent any excretion of bile, and found that its blood, twenty-four hours afterwards, contained bile acids. It was very remarkable that, during the whole time of the ductus communis choledochus being impervious, the dog had not an icteric appearance. The conjunctivæ remained uncolored as well as the rest of the body, and only the urine showed, by the presence of bile coloring matter and bile acids, the true icteric condition.

Kuhne found that in animals with biliary fistula, where there was some obstruction to the excretion of bile by the fistula, bile coloring matter may appear in the urine without bile acids. This seems to be opposed to his previous statement that the bile coloring matter found in the urine after the injection of colorless bile acids into the blood, is to be attributed to the hæmatine set free by the solution of a number of the blood-corpuscles. Kuhne having previously shown that the bile acids always pass from the blood unchanged through the kidneys, it would appear that in this last case the presence of bile coloring matter in the urine was not dependent upon the action of the bile acids upon the blood-corpuscles; for, in that case, the bile acids ought to have been detected in the urine, inasmuch as they pass unchanged from the blood to the urine.

Orfila found biliary resin in the blood of three persons suffering from icterus. Lessaigne and Thenard, on the contrary, declare that they could never detect any constituent of the bile in such cases.

Simon's analysis of the blood in icterus showed a large increase of the solid constituents and of hæmatine.

Sherer often discovered decided traces of bile pigment in the urine of healthy persons, especially during the hot months, and believes that, in disturbances of the function of the liver, this pigment very often presents itself in the urine.

Lehmann says that, in perfect suspension of the biliary secretion, as, for instance, in true granular liver when the urine throws down an intense scarlet sediment, no trace of bile pigment or cholic acid can be detected. He also states, in relation to the formation of bile in the liver, that the most careful examinations have hitherto failed to detect any of the most essential constituents of the bile in the portal vein. The error of supposing that biliary substances have been demonstrated in the blood of the portal vein by means of sugar and sulphuric acid, he thinks arises from the similar reaction which Pettenkofer's test gives, with olein and oleic acid.

From this enumeration of the views of a number of authors it is obvious that there is nothing settled in regard to these obscure points. The experiments and observations of the most distinguished chemists and physiologists have led to very contradictory results.

The question of the cause of jaundice has not yet been satisfactorily settled by pathologists. Further observation and experiment are necessary to solve many of the difficulties surrounding it. Authors generally agree in considering jaundice as a symptom of some affection of the liver or of the blood rather than a separate disease. Dr. Budd defines jaundice to be a yellow color of the conjunctivæ and the skin, arising from the presence of the coloring matter of the bile in the blood and tissues.

According to him, it may be produced in two ways: 1st. By some mechanical impediment to the flow of bile into the duodenum, and the consequent absorption of the retained bile; and 2d. By defective action on the part of the secreting substance of the liver, in consequence of which the secretion or elimination of bile is arrested.

In regard to the first condition I believe there is no dispute, and it is conceded that the majority of cases of jaundice are due to the reabsorption of secreted bile.

Frerichs has objected to the second hypothesis on the ground that, if it be true, the biliary acids and bile pigment ought to accumulate in the blood in cases of granular liver, just as urea accumulates in granular degeneration of the kidneys.

If this objection had been made to the first proposition instead of the second, it would hold good, for the bile, if reabsorbed, ought certainly to accumulate in the blood and be detected there. Yet all attempts to detect traces of the essential elements of the bile in the blood, and in that of the portal vein in particular, have failed; neither the coloring matter nor the acids of the bile having been found. Moleschott extirpated the livers of some frogs; the animals lived for several weeks, but no trace of the elements of the bile could be detected in the blood, lymp, urine, or muscular tissue. Kunde met with similar results. Lessaigne and Thenard affirm that, in their examination of the blood of jaundiced persons, they could never detect any constituent of the bile. We have no sufficient proof of the reabsorption of the coloring matter of the bile into the blood, and this theory cannot be accepted. I would, therefore, apply to the first hypothesis the argument which Frerichs uses against the second.

This reasoning cannot, however, be maintained against the second hypothesis, for, as we have just seen, the coloring matter of the bile does not exist in the blood. It must therefore be formed in the liver, out of the hæmatine of the decomposing blood corpuscles, and under these circumstances we would expect to find accumulation of hæmatine and debris of blood corpuscles, and not of bile. This, I think, is what we really do find, and so far there is a certain analogy between jaundice and uræmia. In each there is retention of an abnormal quantity of substances found in healthy blood, and which are undergoing retrograde metamorphosis. In retention of urea, we only have uræmic poisoning when the urea becomes converted into carbonate of ammonia; and in case of the retention of hæmatine, jaundice occurs only after the hæmatine passes from the vessels and becomes changed into hæmatoidine (cholepyrrhine).

In several of the cases herein reported, it is stated that the urine was dark colored and gave the reaction of bile with Pettenkofer's test. This coincides with some cases reported by others. But it must be remembered that the reaction of Pettenkofer's test is produced by the presence of the biliary substances proper, and is not at all dependent on the coloring matter of the bile, since it is produced equally with decolorized bile.

Now, as this is the test relied upon in most of the examinations which have been made for the detection of the presence of bile in cases of jaundice, it is apparent that it gives no evidence of the presence of the coloring matter of the bile, which is of course the only constituent of the bile which could impart a color to the urine or tissues.

The coloring matter of the bile has sometimes been said to be detected in the urine by the aid of the nitric acid test.

We have seen from a previous statement that all attempts to detect the coloring matter of the bile in the blood, have failed. Liebig has shown that for the most part the elements of the bile re-enter the blood after passing into the intestine, the coloring matter, however, being finally excreted with the feces.

I think it will be conceded that, in order for any substance to be excreted by the kidneys, it must first exist in the blood, unless indeed it be manufactured directly by the kidneys or undergoes a change in its sojourn in these organs. So that when we find a substance in the urine, we conclude that either that substance, or the elements from which it was formed, pre-existed in the blood. If we apply this reasoning to the case before us, we find that the coloring matter of the bile does not exist in the blood, but the element out of which it is formed, hæmatine, does exist there, and we are forced to conclude that the substance found in the urine must have been derived from the hæmatine of the blood.

Again, nitric acid is the test chiefly relied upon for the detection of the coloring matter of the bile. It was used in the cases now presented, and in most of them gave the reaction generally supposed to indicate the presence of that constituent of the bile. But there is another substance which was discovered to be present in these cases, and in some instances was found in the urine examined microscopically—a substance to which Virchow has given the name of hæmatoidine. With respect to the peculiarities of hæmatoidine, he says; "It has, in a theoretical point of view, another special claim to our interest, from its presenting to us a series of properties which render it conspicious as the only substance in the body, at least that we are as yet acquainted with, which is allied to the coloring matter of the bile (cholepyrrhine). By the direct action of mineral acids, or after previous treatment and preparation by means of alkalies, the same or precisely similar color-tests are obtained which are yielded by the coloring matter of the bile when treated with mineral acids, and it seems also from other facts that we have here a body before us which is very intimately connected with the coloring matter of the bile. This circumstance derives its especial interest from its being supposed, for other reasons also, that the colored constituents of the bile are products of the decomposition of the red coloring matter of the blood. In the interior of the extravasations there really does arise a yellowish-red substance, which may be designated as a newly-formed kind of biliary coloring matter.

It is difficult then to determine in a given specimen whether we have present chloepyrrhine or hæmatoidine. The same kind of difficulty arises which occurs in deciding between the white blood-corpuscle and the pus-corpuscle. This is only to be decided by determining the source from whence the specimen is obtained, because we know of no characters by which the globules can be distinguished individually. This, then, is the method which we must use in order to decide between the substances in question.

We have already seen that where Pettenkofer's test has beon used, it could give no evidence of the presence of its coloring matter. In the cases now reported this test failed in a number of instances. The nitric acid test, however, always gave the green color, which we now see would indicate one of two things—either the presence of cholepyrrhine or of hæmatoidine; but inasmuch as cholepyrrhine has never been detected in the blood, we should not expect to find it in the urine, and whereas hæmatoidine was found in the skin and tissues in these cases, and being a substance readily obtained from the hæmatine of the blood, we are forced to conclude that the substance found by the aid of the nitric acid test in these cases was hæmatoidine.

These two substances, cholepyrrhine and hæmatoidine, are probably identical. The distinction which I would here make is between the one as a substance formed in the liver, a constituent of the bile (cholepyrrhine), and the other a substance derived directly from the hæmatine of the red blood-corpuscles, and formed in any of the tissues of the body without the previous action of the liver (hæmatoidine).

If the coloring matter of the bile was really absorbed from the liver or gall-bladder, we ought to find the color of the blood affected first of all, and subsequently all the tissues supplied by it; but this is not the case, for there is a set of tissues which, although well supplied with blood, but rarely partake of the coloration of the skin and urine, viz., the tongue and mucous membranes. Watson states that the secretions furnished by the mucous membranes are in general signally exempt from this change of color. The tongue and inside of the lips present commonly a remarkable contrast with the face of the jaundiced person. Dr. Budd observes that the mucous membrane of the stomach and intestines is never stained with bile except when that secretion has continued to enter the duodenum.

In the examination of the skin and tissues microscopically, a large amount of hæmatoidine was found to be present in the form of crystals and granules, some of them exceedingly minute, and others of considerable size; crystals of large size were most frequently found in the liver. Their color varied from a light yellow to almost black, the shade depending in a measure upon the size, depth of color, and aggregation of the granules. This substance was found in every case, and was most abundant in the parts most deeply colored.

From the foregoing facts it would appear that the yellow color of the skin and tissues, in these cases, was due to the presence of hæmatoidine.

It seems probable that one of the functions of the liver is to take charge of the worn-out blood-corpuscles, the coloring matter of the bile being derived from their hæmatine. The hæmatine, giving up one equivalent of iron and taking one equivalent of water, becomes hæmatoidine (Robin), cholepyrrhine. This change takes places in the liver, and the iron thus liberated is probably appropriated to the advancement of new blood-corpuscles.

It is a function of the skin, also, to remove this metamorphosing hæmatine, thus acting in concert with the liver. The color of the skin in health is mainly dependent upon this function, and it is more or less dark in proportion to the amount of degenerating hæmatine it is required to to carry off.

Prof. J. W. Draper, in his Human Physiology, in speaking of the influence of the action of the liver on the complexion and the origin of color in the races of mankind, observes: "If this organ be in any manner enfeebled in its duty, and no other avenue is open through which the degenerating hœmatine may escape, it must accumulate in the circulation, and be deposited here and there in suitable places. Under such circumstances there arises a tendency for its accumulation in a temporary manner in the lower and more spherical cells of the cuticle, from which it is removed by their gradual exuviation and destruction as they become more superficial. The temporary deposit of the coloring matter in this situation imparts to the skin a shade more or less deep. It may amount to a perfect blackness; for the origin of the black pigment of the negro is the same as that of the black pigment of the eye in all races, and the predominating percentage of iron it presents plainly betrays that it arises from a degenerating hæmatine in which the same metal abounds."

"I believe, therefore, that the coloration of the skin, whatever the particular tint may be—tawny, yellow, olive, red, or black—is connected with the manner in which the liver is discharging its function."

It is not to be forgotten that the coloration of the skin, though apparently persistent, is tending continually to a removal, because of the oxidation which is taking place as the pigment cells approach the surface of the cuticle in the process of desquamation; but as this goes on, new cells and new pigment are perpetually forming beneath, to undergo destruction in their turn. Under this point of view, the complexion of the skin is an index of the energy with which that tissue is addressing itself for the removal of metamorphosing hæmatine. In accomplishing this removal the liver in the fair races of mankind exerts a sufficient activity; but in hot climates, the habitation of the black races, either through a diminished power of that gland or because of an increased production of effete pigment, the skin has to lend its aid, and the degree to which it does this is betrayed by the depth of its hue."

It is probable, then, that it is the duty of the skin to assist the liver in disposing of the metamorphosing hæmatine, and that it derives its color from the discharge of this function. Judging from analogy, we might expect to find that anything which would impede the activity of the one would increase that of the other.

This, I think, we find demonstrated in cases of icterus neonatorum. Here there is no disease of the liver, or any obstruction to the biliary ducts; but owing to the highly congested condition of the liver at birth, and the system not having adapted itself to its new condition, the activity of the liver is interfered with, and the degenerating hæmatine accumulating in the blood from the disintegration of the worn-out blood-corpuscles must now be carried off by the skin, and icterus is the result. This I conceive to be the true pathology of jaundice.

I see no reason to suppose that bile is first formed by the liver, and subsequently absorbed into the blood; if this were true, how can we account for jaundice occuring in cases of acholia, where the secreting portion of the liver is almost entirely destroyed by fatty degeneration, cancer, or cirrhosis? In such instances scarcely any bile is formed.

In the majority of fatal cases of jaundice, and even in those in which the skin and urine were deeply colored at the time of death, the gall-bladder and gall-ducts are found almost empty, and the liver not more deeply jaundiced than the other tissues.

The jaundice must have been the result of a defective action on the part of the liver. Of course there could have been no reabsorption of bile, and this applies equally in all cases where there is no impediment to the flow of bile. It is doubtful to my mind if the coloring matter of the bile is ever reabsorbed in suffiicient quantity to produce jaundice. The only hypothesis by which we can account for this phenomenon is to suppose that the jaundice is the result of the retention of the coloring matter of the bile in the blood, and if this were true the bile should accumulate in the blood.

This, we have already seen, is not the case, and the reason why the coloring matter of the bile cannot be detected in the blood is simply because it does not exist there. As the worn-out blood-corpuscles disintegrate, they liberate their hæmatine; there is a tendency to the accumulation of this substance; and it is from it that the liver forms cholepyrrhine and the skin hæmatoidine, the hæmatine giving up iron and acquiring water in these organs; but so long as the hæmatine remains in the circulation, it is probable that this change does not take place.

Perhaps the retention of the other elements of the bile in the blood may hasten the disintegration of the blood cells.

The kidneys also may participate in the removal of hæmatine, or it may even be extravasated among the tissues, and we would then have all the tissues and organs of the body colored by this metamorphosing substance, as is frequently the case in yellow fever. The shade of color may vary from a light yellow to a perfect black. The bronze skin once attributed to disease of the supra-renal capsules, is probably a variety of jaundice due also to hæmatoidine. The color of the skin in Albinos is the result of congenital deficiency of pigments, and must be referred to the defective manner in which the skin is performing its function, the liver being sufficient for the removal of all degenerating hæmatine. In the negro and dark races of mankind, this activity of the liver is diminished, and in proportion as the skin is required to share in its duties the skin is more or less dark from the deposit of pigment.

The frequent absence of great constitutional disturbance in many cases of jaundice can be readily accounted for by the increased activity of the skin and kidneys, being sufficient for the removal of the effete constituents of the blood which should have passed through the liver as bile; the skin eliminating the coloring matter chiefly, while the kidneys carry off, besides, the biliary substance proper and probably cholesterine.

It is possible that in case of the failure of the liver to secrete bile from the blood, the elements out of which it is formed accumulating in the blood may there exert a deleterious action on the blood-corpuscles, hastening their dissolution, and thus producing a very rapid accumulation of hæmatine and other substances usually carried off by the liver; in this case the skin and kidneys might not be sufficient for its removal, and the free hæmatine having an affinity for the tissues, it would be extravasated among them, and then become changed into hæmatoidine. In this way we can account for the universal presence of hæmatoidine in some cases of jaundice, the tissues becoming colored by a sort of imbibition.

In the experiments of Kuhne, before referred to, where the ductus communis choledochus of a dog was tied, it was remarkable that the only evidence of the dog's icteric condition was to be found in the urine. From this it would appear that the icteric condition was not dependent upon the presence of bile in the blood. If it were so, the blood should have imparted a color to the skin and other tissues. May we not infer, from these experiments, that the difficulty of producing icterode condition of the dog's skin is to be referred to the comparative inactivity and peculiar function of the skin of these animals, and also to the very great activity of the kidneys and salivary glands, especially in dogs?

Dr. C. E. Isaacs, in his paper on the "Function of the Malpighian Bodies of the Kidneys," states that he tied the ductus communis choledochus of a large gray cat in the hope of detecting the elements of the bile in the Malpighian bodies and tubes of the kidney.

This cat lived seventy-five hours, and seemed to suffer but little from the operation. On taking off the skin the under surface of it was observed in several points to be of a bright yellow color. The bile-duct was partially ulcerated, so as to allow of the escape of a few drops of bile. There was slight peritonitis. Thin sections of the kidney exhibited the Malpighian bodies of a light yellow color. Nothing remarkable was observed in the tubes. On adding a portion of a drop of nitric acid to the specimen under the microscope, the Malpighian bodies showed a slight play of colors, among which blue, green and violet could be most distinctly seen. The same effect was seen in the tubes, but not so clearly. It was observed also on testing the urine. Doctor Isaacs repeated this experiment on a large yellow dog, and in addition tied the ureters. This animal lived forty-eight hours. The Malpighian bodies were somewhat congested, and of a yellowish-red color. He was disappointed at the result of this experiment, not being able to detect the presence of bile in any part of the kidney or in the urine, although all the known tests were carefully and repeatedly made use of. He then made comparative tests with the bile from the gall-bladder of this dog, and, what was exceedingly surprising, could not succeed in producing the usual peculiar appearances either with nitric acid, sulphuric acid and sugar, or any of the usual tests for bile, even after the most careful trials. Dr. Isaacs was unable to account for this phenomenon.

Is it not probable that the ligature of the ureters in this last experiment obstructed the tubes and Malpighian bodies of the kidneys, and thus arrested the function of these organs? The ligature of the ductus communis choledochus having acted in a similar manner upon the function of the liver, there was thus left no glandular organ sufficient for the elimination of the elements of the bile from the blood. If this experiment had been made upon man, doubtless the skin would have taken on itself this function, and removed a certain amount of these elements from the blood, and acquired a jaundiced hue.

These experiments seem to indicate that the substances in question require an appropriate glandular structure for their elimination. The dog's skin is not of such a character. With the human skin, however, it is quite different, for we know that it participates to a very large extent in the removal of fluid substances from the body. I think, therefore, that the results of experiments upon dogs to elucidate the pathological conditions of the human skin and glandular organs should be received with close scrutiny.

Stahl and Lieberkuhn have detected urea in the bile after the extirpation of the kidneys. This shows a vicarious action on the part of the liver. In the experiments of Frerichs and Kuhne upon dogs it was noted that hæmaturia was of frequent occurrence. This was probably due to the overtasked and congested condition of the kidneys in their efforts to assume the function of the liver.

This congested condition of the kidneys is of frequent occurrence in jaundice. It was well illustrated in Case IX, by the presence of a large amount of tube-casts in the urine during the first part of the attack, but as the liver gradually resumed its function they entirely disappeared.

Resume.—We may briefly sum up the facts here submitted as follows:—

1st. There is no sufficient proof of the reabsorption of the coloring matter of the bile; it is not found in the blood, and cannot, therefore, occur in the urine or skin unless formed in these organs from elements derived from the blood.

2d. That effete hæmatine, a substance from which the liver derives the coloring matter of the bile, does exist in the blood. It is a function of the skin to aid in the removal of this metamorphosing hæmatine, which, as it passes through the skin, changes into hæmatoidine.

3d. That the tests used for the detection of the coloring matter of the bile are not reliable on account of similar color-tests being yielded by hæmatoidine. To distinguish between these substances we must refer to their source, and in doing so we find in some cases of jaundice there is found, at post-mortem examinations, an almost entire absence of bile in the intestines, gall-bladder and gall-ducts. There is here then no source from which the bile could be reabsorbed into the blood; and, if not reabsorbed, it could only occur in the blood from retention, and, if retained, it ought to be detected.

Now, if it is not possible for us to detect the coloring matters of the bile in the blood, it is fair to conclude that it does not exist there; and, if it does not exist in the blood, how can we expect to find it in the tissues and secretions? and why should the blood impart the yellow color in question?

4th. Hæmatoidine is a substance very readily derived from the hæmatine of the blood. It is a metamorphosing substance, which even in health is in part carried off by the skin. This substance was found to be abundant in the skin and tissues examined microscopically. From this it would appear that the coloring matter found in the urine must have been derived from the metamorphosing hæmatine of the blood, and was also hæmatoidine.

5th. It is probable that the coloring matter of the bile is never reabsorbed in sufficient quantity to produce general jaundice. This affection is to be attributed to the presence of an undue amount of hæmatoidine in the skin and parts affected.

Finally. All cases of jaundice, with the exception of those produced by poisons acting upon the blood and those occasioned by nervous shocks, may be included under one common cause, viz.: A defective action on the part of the secreting substance of the liver, in consequence of which the elimination of the metamorphosing hæmatine is arrested, and the skin and kidneys are required to affect its removal.

Jaundice arising from blood-poisons, nervous shocks, &c., must be attributed to the accumulation of degenerating hæmatine in the blood to such an extent as to require an increased action on the part of the skin and kidneys for its removal.

THE

Galveston Medical Journal.

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We quote freely from the editorials of the "University Journal of Medicine and Surgery," edited by W. Paine, M.D., Philadelphia. We have put some paragraphs in italics and numbered them, and, after reading the following, we will make some remarks on what is more particularly said in italics, which is our own and not the editor's :

THE NEW FORM OF THE JOURNAL.

Having been engaged in the editing and publishing of the Journal for the last ten years, we have obtained much information in reference to the demand of the profession and the wants of the people. We started our Journal as a monthly, and continued it as such for eight years. During that period we faithfully recorded all the essential improvements in Medicine and Surgery, and, although our patronage was as large as any other journal of a similar character, yet the failure on a large part of the subscribers to pay, rendered our losses every year about five hundred dollars, besides the loss of time and labor, making an aggregate loss of four thousand dollars. For the last year we tried the experiment of publishing it in a quarterly form, and at an advanced price. This, too, has been a failure, by which we lose seven hundred dollars more. We have standing on our books about four thousand dollars against those who have subscribed for the Journal and promised to pay, but failed to do so, making a loss for nine years of not less than five thousand dollars, besides all the labor and time required in the management of the Journal. In making these statements we fully appreciate the assistance, both pecuniarily and otherwise, of those who have punctually paid their subscriptions and contributed to its pages. We now present the Journal in a form adapted to the profession and the people, and are confident that any lack of support it may receive from the profession will be compensated for by the non-professional readers. It is a lamentable fact that the people have always been in advance of the profession in their desire to obtain medical knowledge and adopt new modes of treatment. One great difficulty, however, which they have had to encounter, is their inability to obtain information as to the reliability of the different systems of medicine.

No. 1. *The Allopaths, or old school physicians, have labored most assiduously to prevent the people from acquiring a knowledge of their mode of treatment; hence they have published most of their formulæ in Latin abbreviations, and by their code of ethics prevented their members from publishing their system of practice or medical treatment in such a manner as to make it intelligent to the non-professional.*

The Homœpaths, although a little more shrewd in their management, have been equally secretive as to the real merits of their practice, as, while they have published a great variety of popular works upon the treatment of disease, they have carefully concealed every fact that would enable the people to understand the real nature of the drugs they were using. Hence they omit to publish the popular names of their medicines and the method of preparing them. Thus, they furnish their patients with snake saliva, fish-manure, tincture of bed-bugs, arsenic, mercury, and many other poisonous and disgusting agents, without enabling the domestic prescriber to understand, in the least, the character of the agent he is using. Then, again, coffee, sulphur, chamomile, and many of the most simple agents in daily use are diluted, triturated, or tinctured, and with these, a few sugar pills are moistened, put in vials, and sold in packages for medical use, without acquainting the person who uses them, of their strenght or power beyond the assertion of the medical tyro, who sells a phamplet directing their use.

No. 2. *If they wish their system investigated, why not publish the common as well as the classical name of the drug, the method of preparing it, so that he who uses it may do so intellegently? In these respects, the two most popular systems of practice occupy no higher position in relation to the public than does the patent medicine dealer or nostrum vender who trumpets the fame of his elixir vitæ and panacea through newspapers and comic almanacs, as the people have as much real intelligence as to the nature of these drugs as they do of those used by the different schools of physic.*

Now, we propose in this paper, so far as is in our power, to unmask these different systems of medicine as well as the patent nostrums, that the people may see them in their true light, and thereby judge of their respective merits. We claim that the public should have as much interest in their health and lives as they have in pecuniary matters at least. What financier would invest his capital without first investigating the merits and demerits of his investment? The lawyer and clergyman have, too, publicly proclaimed their doctrines and exhibited their abilities. The merchant, mechanic, and banker, in their operations, are open to public inspection; and so it is with all trades and professions, with the exception of that of medicine. But the doctor can secrete himself behind his sugar pellets of lachesis, or the Latin formula, while the more bold patent medicine vindicator holds between his medical compound and the public eye who would scan his secrets, a revenue stamp, and sneeringly tells his dupes that a nation has thus protected his imposition.

Although these statements relating to the profession apply generally to the various systems of medicine, we are happy to state that there is now a large number of educated, intelligent and skilful practitioners of medicine who have no sympathy with any of these dogmatical schools of physic, or secret arrangements of the profession, but are bold, independent practitioners of physic, availing themselves of the resources of all schools of medicine, and spurning the idea of being labelled either Allopathic, Homœopathic, Hydrophatic, or Eclectic. They have no medical secrets, and are ever ready to publicly promulgate everything pertaining to their practice which may contribute to the general good. It is to this class of practitioners that we look for hearty co-operation in our efforts to elevate the standard of our profession to that high and honorable position which its merits entitle it, and to so educate the people as to discriminate between the medical empiric and the educated practitioner of medicine.

MEDICAL CREEDS.

No. 3. *One of the most pernicious evils of the present day is that of medical creeds. The Allopathist, believing in his creed, will not adopt the treatment of the Homœpathist, or any other system of medicine under any circumstances, although he knows full well his own fails; hence he dialy allows his patients to die under the same system which has so frequently proved unsuccessful in thousands of similar cases. His only excuse is that he has no faith in any system, excepting that which he has adopted.*

The Homœopathic, Eclectic, Botanic, and Hydropathic adopt the same method of adhering to their practice, and never think of trying another system, however unsuccessful their own has been. They, too, offer the same argument, that they have no faith in any system of medicine excepting their own. Now, the truth is, that all these systems of practice prove successful in some cases, and equally unsuccessful in others, and the only reasons that these parties have no faith in opposite systems, is because they have not fully tested them.

No. 4. *It is true, some have much more merit than others, but to be a whole physician, and do all the good to suffering humanity that the science of the healing art is capable of doing, he should adopt no medical creed nor system of practice to the exclusion of any other. He should familiarize himself with the entire practice of medicine, and avail himself of the medicinal resources of all* *systems, and whenever one fails after a fair trial, before it is too late, he should adopt another, and thus give his patient the benefit of the entire art of medicine.*

MEDICAL COLLEGES.

The Philadelphia University of Medicine and Surgery, organized 1848; chartered by the Legislature, February 26th, 1853; amendments to the charter, February 15th, 1860, and March 15th, 1865. The original incorporation, as well as all the amendments, are the special acts of the Legislature of Pennsylvania, published in the statutes of the State. The University is now empowered with all the rights of a university, and has been officially recognized by the College of Physicians and Surgeons of London, so that the medical student who receives its diploma possesses the highest honors known to the medical profession.

No. 5. *The principles taught in the University embrace everything new and valuable connected with the profession; as, while it does not adopt the narrow and illiberal views of any one sect, it assumes a bold and independent position in medicine: claiming that all truths, whether in principles of practice, pathology, or remedies, belong to legitimate medicine, and should be taught to the students of all medical colleges.*

The trustees and faculty of the University are well aware of the great embarrassment experienced by young physicians, who are mere graduates of some of the irregular schools, for in no public capacity, either in this country or in Europe, are they recognized as legitimate; and so far as holding a diploma is concerned, the student might as well save his money, for, in a professional point of view, the document is entirely worthless. And it is this knowledge that prompted the trustees to so arrange with the University as to have all the graduates of the Eclectic Medical College of Philadelphia receive the University degree.

There were no medical students of any Eclectic or Homœopathic colleges who could hold a position in the army during the late war, except as they obtained degrees at other colleges, or passed the various medical boards under false pretences.

In receiving the degree of the Pennsylvania Medical College, the graduates of the Eclectic Medical College of Philadelphia thus secured an advantage over other schools. Notwithstanding this, the success of medical reform has been most triumphant in the great and radical changes effected in medical practice within the last twenty-five years, and in the numerous additions of our materia medica.

No. 6. *The efforts to establish Eclectic medical colleges, however, have been a comparative failure.*

The Eclectic Medical Institute of Cincinnati has very small classes, and has been gradually decreasing (both in the number of students and in influence), ever since the death of Morrow and the retirement of Buchanan; while those of Virginia, New York, Rochester, Memphis, and Worcester are numbered among the things that were. It is true the College of Cincinnati has a feeble existence, but it is destitute of the means for teaching requisite in a well organized medical institute, while the so-called Eclectic College of this city holds its lectures in one or two small rented rooms, without even a show of respectability, to say nothing of the absence of every facility for teaching which would even approximate towards a medical college; the whole concern being a burlesque—a subject for derision for every intelligent medical man. In New York, Dr. Newton is trying to collect the fragments of the exploded Eclectic colleges, and to organize a school, but, judging from his miserable failure in Memphis and Cincinnati, where he had much more favorable opportunities for success, we can scarcely expect more than a college on paper.

No. 7. *Another fact which tends to prove that Eclectic colleges can never succeed, is that, to my own personal knowledge, more than one half of those who graduate from them resort to other medical schools to receive their degree, or in some way or other obtain it, justly remarking that they would rather receive a regular diploma that they may practice medicine as they choose. A large per cent. of the balance never acknowledge themselves as Eclectic graduates, while most of the Eclectic physicians send their students to regular colleges.*

In view of these facts it may be the opinion of many that Eclecticism in medicine has been a failure, and that medical reform is fast approaching a close. So far from this being the case, it has proved a great success, having almost entirely revolutionized our materia medica, and most essentially modified and improved the practice of medicine; and all liberal, educated and honest physicians are now profiting by our labors.

No. 8. *We now propose to take advantage of our efforts by taking charge of legitimate medicine, teaching and practising it as the regular profession, while the old fogies may occupy the position of outsiders, quacks and empirics. The University is organized upon the broad platform of legitimate medicine,* with a most magnificent college edifice, free from debt; a large museum; a chemical, physiological, and mineral cabinet; with all the advantages of the extensive clinic practice of the college and the hospitals of the city; together with the unparalleled cheapness of the fees (it being only seventy-five dollars for a perpetual scholarship, or eighteen dollars each for four full courses of lectures), with sixteen teachers, most of them old and experienced, and ranking among the first in the profession, are a few of the many reasons why the Philadelphia University of Medicine and Surgery ranks among the first medical colleges of America and Europe.

QUACK MEDICINES.

It is considered beneath the dignity of the medical profession to notice quack medicines, and yet they all agree that their sale, and their indiscriminate use by the people, is one of the most pernicious evils of the age. On picking up a small country newspaper, we find nearly one-half of its colums devoted to advertisements of patent medicines, in which all of the ills flesh is heir to are guaranteed to be cured in a most speedy manner. One man states that he has a solution of iron which strikes at the root of all diseases, and cures dyspepsia, boils, fevers, and female diseases, instanter. To substantiate his claims, he refers to an eminent divine in Boston. Another man has a solution of iodine in water, which cures all cases of consumption, female diseases, scrofula, and rheumatism with the utmost ease; all that is necessary is to buy six bottles for five dollars. Another advertises a balsam of wild cherry, a panacea for consumption and all kindred diseases, for proof of which he refers to numerous clergymen, while still another has discovered a salve that, when applied, entirely renovates the constitution.

Others, of equal pretensions, have infalliable hair tonics to prevent baldness; sarsaparilla compounds, to cure all defects of the constitution, including consumption; worm lozenges, to cure all manner of worms; rheumatic liniment, which has only to be applied to produce instantaneous relief; carminatives, to make children fat without food or care, besides curing all manner of cholics, cholera, and dysentery; eye-salves, to cure all diseases of the eyes; cathartic pills, to remove all difficulties of the bowels; camphor troches, infallible for cholera; tar cordial, expectorants, liver pills, and many other compounds and panaceas. This paper is but a fair sample of newspaper advertisements throughout the entire country, and we regret to say that more than one-half of all those that labor under chronic diseases resort to these quack compounds for relief.

The physician replies, they ought to know better, as every sensible and educated physician is aware that all these mixtures are either inert, or composed of the most common articles of the materia medica, which every well-informed physician prescribes whenever the patient requires them, and that the sole purpose of the nostrums is to obtain money from the afflicted under false pretences; and that while the sufferer is thus trifling away his time, very many diseases advance to a stage that renders recovery impossible by the best-directed efforts of the physician. The duty of the physician is not to let these gigantic frauds pass without notice, but to so instruct the people in regard to the principles and practice of medicine and hygiene as to enable them to appreciate the difference between the application of medicine by a skilful physician, according to the nature and circumstances of the case, and that of some secret compound indiscriminately recommended. In order to accomplish this, medical journals should be so conducted as to be intelligible and interesting not only to the profession, but to the people generally.

As they are now managed, they are mostly devoted to the interest of the practitioner, and are considered of no interest whatever to the public; hence, the only source of medical intelligence for the great mass of the people is that of the public newspapers; and these being filled with laudatory advertisements, and imaginary cures by respectable citizens, it is hardly to be supposed that this class of frauds will not receive a large patronage, whereas if the medical profession did their duty in furnishing the people with proper medical intelligence, the patronage of the profession would not only be increased, and a much larger per cent. of cures effected, but all these quack nostrums and delusive systems of medicine be banished from the catalogue of frauds.

The reader, having passed over the above editorials, is prepared to appreciate the following remarks, and by returning to paragraph 1, in italics, he will find that he accuses the old physicians of writing their prescriptions in Latin, with the view of making it unintelligible to the common people. This is *not literally true;* for all our medical terms are explained in English in every work we have read, and not to write in English is to show ignorance and a want of precision; for in no language or by any terms can a disease or medicine be so well defined as in the Latin or derivations from the Greek. Every neighborhood has its peculiar common name for a disease and a medicine that is not known out of the immediate district not to say anything of a foreign country or in a foreign language. While the Latin or classical name is given, it is understood all over the world; besides, it is customary in all medical works to give the most generally received common name either before or after the classical one. As to the prescription in Latin, that is an absolute necessity and is much better understood by the apothecaries, and our code of Medical Ethics does not prohibit our writing prescriptions in any term or terms we wish, and urges us to write in such terms as can be best understood by those to whom it is directed.

Paragraph No. 2, in italics, is, so far as I know, untrue, as I have shown above.

Paragraph No. 3.—This also is nottrue, for we use any and everything known and approved by rational men; but we are not compelled to believe in perfect absurdities, nonenities, non-feasibles; nor are we willing to exclude those remedies that for thousands of years have proved efficient, such as bleeding, blisters, mercury and opium, which the Botanics and Eclectics (*so-called*) do. Nor are we required to believe that all pains flesh is heir to, can be washed away by water, cold or hot, steam or ice, as our Hydropathists say.

Paragraph No. 4 is exactly our creed; we believe every word of this paragraph, and are somewhat surprised that the editor did not know that was the exact meaning of the word Allopathy (from Allos, other; and pathos, disease). The curing of a diseased action by introducing a different kind of action, yet not necessarily diseased—that is, to use anything that will remove the course of the disease, whether vegetable, animal or mineral. While Homœopathics believe to cure all diseases by producing like disease, but use all remedies as the Allopathists do. But they know full well if they produce an inflammation to cure an inflammation it is only derivative, and is what Allopaths have done from Hippocrates down; and, again, they know if they give efficient doses they will, on these principles, produce death; hence, they prefer to give nothing, (as I understand their books), but they give the most powerful remedies under small doses, but which in reality is quite efficient.

Paragraph No. 5—We heartily approve of and have been faithfully drilled in such a college, and we are gratified to see the change that has undergone in the editor's school—we welcome him back to the true FAITH.

Paragraph No, 6 is news to us, for we did not know that the day of sensible things was so near at hand, for truth is immortal and can never die; and as these schools have *failed*, they were not founded *in truth*.

Paragraph No. 7 is also true, to our personal knowledge, but we attributed their failure to the want of success and the increasing knowledge of the students—in other words, they found out the *truth*.

Paragraph No. 8 shows the change the editor has undergone, and he could not have said more for the truth of our profession than that he had adopted "legitimate medicine." We do not believe his college will be successful, for his professors lecture too cheap, being only $75. Too cheap to be energetic. Something cannot come of nothing, and wise and intelligent men must and will be paid. They have too many professors—what is everybody's business is nobody's business, and nothing will be well done.

We are not surprised at his losses on his Journal. It is too cheap:

Single copies	$1.00
Five copies to one address	4.35
Ten copies	7.50
Fifteen	9.30
Twenty	10.00

We charge for our humble sheet ten times as much, and have been scared all the time for fear we might lose, but we are determined it shall not be our fault, for we will charge enough to pay us, and we do not want any cheap subscribers; we want liberal and high-minded physicians for our readers.

No. 3. Paragraph No. 9 is a notorious fact, and we believe all the editor has said, and we hope our readers will note the same.

We have thus taken up our pages with the present history of systems of medicine, and we believe it will be instructive to our readers as many have claimed to be of these sects. We war with none, we speak for TRUTH, and wish the editor success and his college.

Report on Puerperal Tetanus.

Tetanus, under whatever form it may present itself, or whatever the cause which may produce it, is a formidable malady, and in a large majority of cases has bid defiance to all remedial agents.

Regarding the causes which have produced it, it has been divided into idiopathic, traumatic, or diastaltic, and toxic tetanus. The first is the result of constitutional morbific changes which have taken place, resulting in the production of certain morbid poisons, which circulating in the blood are carried to the spinal axis which they impress, and the result is that the peculiar phenomena are produced. The *traumatic* variety has been referred to a distal irritation produced by mechanical lesions in which a distal nerve has been injured, which being excited, the irritation is conveyed to the spine, and through reflex influences to the muscles. The *toxic* division is produced by an agent introduced into the circulation, then distributed to the spine where its specific powers are acknowledged and the muscles are thrown into a tetanic state.

But the disease has appeared under other circumstances than those usually recognized and related, and of such frequency and uniformity as to suggest the propriety of a separate division and denomination, and therefore the designation which has been adopted by others and found at the head of this paper. Whether the distinction is legitimate further investigation must determine, when a more extended observation and experience shall have thrown more light upon the subject; enabling us to say whether there is anything in the puerperal state peculiarly calculated to awake the phenomena, and differing in its nature from the other causes believed to be active in its production. The facts referred to before, of its frequency and uniformity, under certain puerperal conditions, are circumstances which claim for it further investigation and research. It is by no means inconsistent with its nature, nor incompatible with the law of causation to ascribe to it a two-fold origin or combination of causes, traumatic and idiopathic, and an examination of the cases which follow may, to a certain extent, favor this idea and give force to this suggestion.

It is worthy of remark that in our recent works on midwifery, and the standard authorities on this subject, no mention is made of this disease as one ever growing out of the puerperal condition. Because of this omission the practitioner, although on the alert for other well-known results, is not taught to expect one of so formidable a character. From this fact, and in order to place this frightful malady among those which may follow, although not with that frequency with which other morbid manifestations occur, and to awaken the attention of the medical mind to an investigation of the predisposing and exciting causes in its production, the subject is now presented to the profession with a compilation and the history of the cases which we propose to present.

It is much to be regretted that the subject has been so much overlooked and neglected, and yet Dr. Simpson, who is the only recent authority on the subject, refers back to Aretæus, who, when enumerating the causes of tetanus, includes abortion among them. From the report of the former author, however, it is by no means confined to abortion, for he has collected and reported a number of cases which occurred *post partum* with one in which pregnancy did not exist, but simply a diseased condition of the uterus.

Before proceeding, however, with a detail of the cases, we would call the attention of the reader to the results of the experience of Dr. Simpson when he says that "it is fatal in its issue," and, therefore, to be regarded as truly formidable. "Lesions of the uterus," he says, "are not liable to result in traumatic tetanus," and in this opinion Dr. Reid concurs, and says "that he never saw a case resulting from internal injury." Certainly it is a very unusual occurrence, and yet in the cases reported by Dr. Simpson, which occurred *post partum*, one occurred after the Cæsarean section, another in which delivery had been preceded by a surgical operation, and then the case of Dr. Little, of Dublin, Ireland, which will be found in the following pages, to which again may be added the case which resulted from the removal of the polypus from the uterus of the unimpregnated female.

The cases which followed abortion will now be presented. Those reported by Dr. Simpson are here embodied in a condensed form, preserving the most striking and essential features. It was deemed important to do so in order to exhibit the number of cases and the peculiar circumstances preceding and attending, as well as the result of all the cases. To this catalogue will be added in detail the cases which occurred under our own observation with others collated and collected from other sources. In referring to the cases reported by Dr. Simpson, the author is moved to it by a desire to present in one paper all the cases reported, so that the statistics and the phenomena of the disease, as it has thus far been met with, will be of ready access, and constitute a nucleus to which interesting and valuable additions may be made from time to time. This, together with the fact that the observations of Dr. Simpson may not have been accessible to all those who may find them here embodied, is the apology offered for reproducing them at this time.

The *first* which will be introduced was the case which occurred in the unimpregnated state of the uterus. The subject had long suffered from menorrhagia, in consequence of a polypus of the uterus, which, being attached to the interior cavity of that organ, was finally, by surgical interference, removed therefrom. On the ninth evening after the removal of the tumor, she was seized with tetanus, and died in fifty-five hours after the supervention of the first tetanic symptoms.

The *second* was one of pregnancy advanced to the third month. Large clots were discharged, and in three days the patient was comfortable. No mention of expulsion of fœtus or placentia. Seven days after the first symptoms of abortion, she complained of sore throat and stiffness of the jaws. These symptoms increased, spasms ensued, and in three days after the advent of these symptoms the patient died.

The *third case* was one in which abortion took place, and in which, two weeks after, the patient was seized with symptoms resembling cynanche parotidea. The next day she was unable to open her jaws; the day following the symptoms were aggravated; and the next, tetanic spasms came on, which rapidly increased, and death ensued in a few minutes. No mention is made of the expulsion of ovum, but, it is presumed, because the word "abortion" is used.

Fourth case.—Pregnancy advanced to between two and three months.—Seized suddenly with hemorrage, which soon ceased. Pulse quick and feeble. No positive evidence that the ovum was expelled. In six days, stiffness of jaws, trismus, spasms, opisthotonos complete. Died in three days from first symptom of tetanus.

Fifth case.—Duration of pregnancy not given. Much hemorrhage; ovum supposed to have been discharged. In seven days tetanic symptoms, severe paroxysms, threatened strangulation; died in sixty hours.

Sixth case.—Miscarried. Ovum expelled, it is presumed. Trismus; but attracted little attention from the interne of the "Hopital Chocin" in which the patient was confined. Spasms slowly extended to all parts of the system—opisthotonos and death. Autopsy showed no lesion of brain, spinal marrow, or other viscera.

Seventh case.—Pregnant three months, when abortion resulted from sudden emotion. A sudden and copious gush of blood was the first symptom. Checked by tampon, but recurred with violence on the next day. No expulsion of ovum, but shreds, having the appearance of decidual membrane, were discharged. Trismus on the twelfth day after the first symptom of abortion, and in two days after this again, spasms occurred; were relieved on the fourth, were renewed on the sixth, and on the next day, the seventh, the patient died. A peculiarity was observed in this case, in that, instead of the mouth being resolutely closed, it was thrown open.

Eighth case.—Ovum was discharged, it was supposed. In eight days after, the muscles of the jaws became rigid, and on the next day were determinedly closed. Spasms followed with opisthotonos, and death in seventy hours from tetanic symptoms.

Autopsy showed the uterus to be of ordinary size, lining membrane emphysematous, in substance similar to the lung, but no decomposition.*

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*In a majority of these cases the average duration of life after the advent of the first symptoms was nearly sixty seven-hours. In the 7th case they appeared and were relieved several times within seven days.

The first case in the foregoing catalogue occurred without pregnancy, but had long suffered from hemorrhage. In all the other cases there must have been more or less hemorrhage. In the second, fourth, fifth, and seventh cases the discharge was copious. This fact should be borne in mind. May not the exhaustion of the vital powers induce irritability and predispose to spasm? Kusmaul says: "In man, and, as it would appear, in all warm-blooded animals also, a rapid and sufficiently copious loss of blood will give rise to general convulsions." Marshall Hall, too, in his treatise on blood-letting, gives several instances in which convulsive movements were induced by excessive loss of blood. Sir Astley Cooper also entered upon some satisfactory experiments, showing with much force the truth of Marshall Hall's doctrine of *excitable cerebral provinces*.

In these cases we find the cerebro-spinal system especially involved arising out of this general humoral exhaustion, but in the phenomena under discussion the sympathetic and spinal systems appear to be concerned chiefly, as there are no cerebral symptoms. The irritation begins in the sympathetic, but ultimately the spinal system is involved through connecting filaments, and hence the particular form of convulsive movements.

Ninth case.—This, the first of three cases which were observed by the author, occurred in this city (Keokuk, Iowa) in the spring of 1850. The patient was a young married lady, and aborted in the third month of her pregnancy. She was of nervous temperament, and somewhat inclined to melancholy and great dejection of spirits. The fœtus was expelled shortly after the advent of the flooding; the placenta, it was supposed, was still retained. The hemorrhage was considerable and continued so long that the general surface was blanched and the patient much exhausted. The pulse became small and frequent, and the discharge from the vagina was pale and watery. Seven days from the appearance of the hemorrhage I was requested to visit her.

Found the os uteri closed and excessively sensitive to the touch. Any proceeding with the view to ascertain the fact as to whether the placenta had passed was found to be impossible. Was assured by patient and attendant that it had not.

Although the discharge had somewhat diminished and its character more of serosity, yet I determined upon the use of the tampon to arrest it, and at the same time to induce the uterus to throw off the placenta. At the same time stimulants, narcotics, and astringents were used with cold cloths to the vulva.

The following day showed no abatement of the symptoms; on the contrary, an exaltation of all, with the presence of new phenomena.

The os uteri continued to be resolutely closed, and there was an exaltation of the sensibility. There was a fetid discharge, which, when the tampon was removed, was as free as on the day proceeding. There was pain extending from the junction of the spine with the sacrum to the base of the occiput, with the most painfully acute sensibility over the whole surface, for the slightest touch, and even a breath of cool air, were painful. The tongue was furred, the urine scanty, the skin dry, although the temperature was rather lowered, and the pulse had increased to 120, with decidedly a thread-like feel. There were restlessness and sleeplessness, and a general feeling of mental and physical disquietude and irritability. The treatment was opiates, and the local application of ext. belladonna smeared upon the os uteri, which was followed during the same day with topical application of chloroform vapor and a liniment composed of the ext. belladonna and chloroform to the spine.

The above symptoms increased during the next twenty-four hours, and at the end of the above period there was deep sighing, depression of spirits, and a hopeless state of the mind. There was no abatement of the sensibility of the os to the touch ; the skin was still dry, but its temperature still lower ; suspension of urinary secretion, the tongue smooth, red and dry.

Thus the symptoms continued during the night, but in the morning there was, to me, in such cases, an unusual set of phenomena inaugurated. There was rigidity of the muscles of the jaws, of the larynx and pharynx, so that there was difficulty of speech, respiration and deglutition. Pain increased along the spine, the muscles in that region being rigid ; all movement performed with difficulty, and attended with increased suffering. Spasms with opisthotonos speedily followed.

There was now no difficulty in diagnosing the case to be one of tetanus, and in defiance of narcotics and antispasmodics, with kindred and auxiliary agents, it terminated fatally, in forty-eight hours after the appearance of the first symptoms of the disease, with the most fearful and frightful demonstrations of suffering. To the last the os uteri remained rigidly contracted, and such was the excessive irritability of the organ that the "touch" would bring on a tetanic spasm with opisthotonos.

An autopsy was not permitted, and the doubtful question as to whether the placenta was retained was not settled. This was the first case which had, after many years of active practice, fallen under our notice, and this fact, together with the solicitude which the superior accomplishments and excellence of the lady herself inspired, rendered the case one of peculiar interest.

The *tenth case* was also committed to my care on the 28th of March, 1858, in this city. The lady was of delicate constitution, and pregnant for the third or fourth time, but miscarried four days prior to the above date, when I visited her. The history of her gestation, together with the size of the fœtus, indicated that she had reached her third month. The expulsion of the fœtus was preceded by some hemorrhage but no pain. Preceding the hemorrhage there was a discharge of liquor amnii. The placenta did not follow the fœtus. The flow of blood continued, but not copiously ; and, although somewhat enfeebled, she continued her domestic duties to a limited extent. In this condition I found her, and, deeming it important to understand more of her condition, proposed a vaginal examination, but was waived by her

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from a sense of delicacy, and because she believed it was not important. Quiet and repose in a horizontal posture were enjoined, urging meanwhile the importance of an examination if no change in her condition took place by the time of my next visit. I then left with the understanding that, if she did not improve, she would request me to attend again. This she did not do until the evening of the 30th, nearly three days after. Failed again in obtaining her consent to an examination. Left as before, to be summoned when necessary. Saw her again on the 1st, 2d, and 3d days of April, each time urging, and as often failing to obtain, an examination, although the hemorrhage continued, and was manifestly increasing, from the symptoms of enfeeblement. The remedies directed for its suppression succeeded, and she was free from it until the 12th, when it recurred again somewhat violently.

Now for the first time I was permitted to make the "touch," when I found the os rigidly closed, notwithstanding the long continued flooding, which, it would be supposed, would relax the structures. Not only was it closed, but irritable, so much so, that the contact of the finger produced so much suffering as to be almost unendurable.

At this juncture Dr. Allen, my associate then in practice, saw her with me and concurred in the opinion that an attempt to search for the placenta was impracticable, because impossible to effect an entrance within the cavity of the uterus. All the remedies usually adopted for the purpose of arresting the bleeding were alternately adopted, including the tampon, but the only effect was to moderate, but did not suppress it. The ergot was given to awaken uterine contraction with the view to the expulsion of the placenta, because of the assurance that it was retained from the circumstantial evidence being afforded by the persistence of the hemorrhage and the fetor of the discharges.

Febrile symptoms supervened, which were combatted by suitable remedies and anodynes to procure sleep, which, for more than forty-eight hours, had been denied to her.

On the 20th, twenty-seven days after the expulsion of the fœtus, trismus showed itself, combined, as I thought, with some manifestations of hysteria. There was the usual difficulty in swallowing, there was pain in the articulations of the lower jaw, and as the mouth could be but slightly opened, fluid food was given in small quantities and often repeated, which, with her drinks, was swallowed with great difficulty.

The symptoms increased during the night, the jaws became permanently closed, the head drawn back, the lower limbs forcibly extended and the points of her fingers pressed tightly in the hollow of the hand. In fine, we had all the symptoms, presented in this case, of tetanus, which increased in violence until death closed her sufferings, which took place on the night of the 22d, just forty-eight hours from the first appearance of trismus.

The treatment consisted in the exhibition of narcotics, stimulants, and anæsthesia with chloroform, which last she took almost constantly, affording her the only relief she experienced. Ice was applied to the spine, the oil of turpentine by injections, and often repeated.

The bowels being constipated, croton oil was dropped upon the tongue. Her mind remained to the last clear and unclouded, and she was fully conscious of her hopeless condition.

The *eleventh case*, and the third which has fallen under my observation, occurred in the autumn of 1859, and at a distance from this city. I did not see the patient until a few hours before its fatal termination. The history, afforded by the medical gentlemen in attendance, revealed the fact that the lady had aborted between the second and third month of her pregnancy, which was produced by a fall when in the act of gathering fruit from a tree. A most violent hemorrhage was the first symptom, and in a short time the expulsion of the ovum entire. This was followed by moderate flowing during five days succeeding, to control which, opiates, astringents, the application externally of cold water, cool acidulated drinks internally, and the tampon were persistenlty employed. I also learned that the introduction of the finger into the vagina occasioned pain, and in a particular manner, when brought in contact with the os uteri, the suffering was so acute as to require the explorer to desist. The tampon, of course, when introduced caused so much pain that it was removed because too intolerable to be long borne. In five days trismus presented itself, and was speedily followed by tetanic spasms. Sometimes there was opisthotonos, and this was exchanged for pleurothotonos. Died in sixty hours from first tetanic symptom. In no one of these cases was permission obtained for a post-mortem examination, and, therefore, much to my regret, I am unable to speak of morbid appearances.

The *twelfth case* is one recently reported by Dr. Atlee to the Philadelphia County Medical Society, and which the author kindly transmitted to me. I herein transcirbe the report in full:

"Mrs. D——, aged twenty years, and about eleven months married, was taken with flooding on the night of January 18, 1860. I was called up before day on the 19th to visit her. She was full two months gone. There were pretty free hemorrhage and some pain. No other cause for the threatened abortion was assigned than a very long walk she had taken some time before. On making a digital examination I found the uterus proportionately developed for the period of gestation, the os uteri was closed and thrown back toward the sacrum, and the cervix was not expanded. The parts seemed to be peculiarly sensitive, but as the patient was laboring under considerable nervous excitement I attached but little importance to this symptom. In this condition of the os and cervix uteri, I thought proper to attempt to save the ovum, and for that purpose I prescribed acetate of lead and opium, cool drinks, perfect rest and quietude. As there was no prostration I avoided the use of the tampon, knowing that it would defeat the object that I had in view, particularly in the tender condition of the cervix. I made two more visits during the same day, and was gratified to find a gradual diminution of both hemorrhage and pain, and before night an entire subsidence of the latter. I continued to make daily visits until the 23d, not deeming it necessary to make another vaginal examination, as her improving symptoms all favored the idea f recovery. The pain had altogether ceased, although a slight red discharge continued.

"On the morning of the 23d she had a return of the expulsive pain to such an extent that I again made an examination. The os uteri was now open enough to admit the index finger easily, and enable it to pass around the partially protruded ovum, and the cervix was expanded. The parts were still sensitive. Being now certain that abortion could not be prevented, I suspended the acetate of lead and opium, and favored its occurrence by ordering 1 drach. of the wine of ergot every two hours. On making a visit in the after part of the day, and examining again, I found the ovum almost entirely out of the os uteri and held *in situ* by the usual attachment between it and the interior of the uterus above. In accordance with my usual practice I overcame these slight adhesions with my finger and removed the mass. This occupied but little time, although the patient complained considerably during the manipulation, particularly while dislodging the mass from the vagina after it had been detached from the uterus. When entirely removed she was easy. On leaving her for the night I ordered a teaspoonful of paregoric to be given in case of pain.

"The mass removed resembled placenta and its membranes, but no embryo was discoverable.

"Next day, the 24th, the patient was very well and very cheerful. Her bowels were opened freely by medicine.

"On the morning of the 25th I was sent for before my usual time for visiting. On arriving at the house I found the patient holding a wooden pencil between her teeth to keep the jaws separated, and the muscles of the jaw were rigid, she being unable to open her mouth voluntarily. She had previously informed me that she was exceedingly nervous and subject to hysteria. The idea of tetanus not entering my mind, I at once supposed, and so announced it, that the attack was hysterical, and with this view I ordered repeated doses of Hoffmann's anodyne. I believe she succeeded in swallowing one dose of it with difficulty, but no more, and the muscles of deglutition seemed to become involved. On a subsequent visit the same day, in consequence of the inability of swallowing, I ordered her enemata every two hours of tincture of assafœtida, and sinapisms to the spine and stomach. The tonic rigidity was still confined to the muscles of the jaws. Very little change in the symptoms occurred during the whole day.

"During the night of the 25th her mother informed me that she had a spasm, and, on making a very early visit on the morning of the 26th, I was convinced that the disease was tetanic instead of hysterical. The muscles of the neck and back had become involved so that the head was permanently and violently drawn back, while the tonic spasms of all these parts rendered everything as hard as a board. The usual acute pain at the lower part of the sternum, piercing through to the back, was, however, entirely absent, and at no time afterwards manifested itself. The pulse was accelerated, but soft and voluminous. The throat seemed phlegmy, and the patient complained of a peculiar tightness there, and oppression in breathing, and frequently worked away the frothy sputa from the mouth. During all this time, and up to the period of death, a piece of gum elastic was kept between the front teeth to keep them apart.

"Satisfied of the existence of tetanus, I now inquired whether she had received any wound, had pricked herself with her needle, had trod upon a nail, or had in any way hurt herself. She at once asked if she had hydrophobia, and immediately said that the dog had scratched her hand about three weeks before. She held up her hand, on the back of which I noticed the mark of a very superficial wound, but which I considered too trifling to account for the symptoms. I now inquired into the character of the discharges. The urine was freely secreted and passed, and two napkins sufficiently stained with lochia were brought to me, and which had been removed during the night previous. I next made an examination per vaginam. The parts were moist, free from heat, and entirely free from the tenderness which had existed before the abortion. Strong pressure over the whole abdomen was unattended by any soreness. She had no pain anywhere.

"A large number of leeches was immediately placed over the cervical and dorsal vertebræ, and a considerable quantity of blood removed, and four drops of the tinct. veratrum viride were ordered with the assafœtida as an enema every two hours, and as deglutition was impossible, I administered by inhalation a mixture of two parts by measure of sulphuric ether and one part of chloroform. The effect of the anæsthetic was most soothing and gratifying. She was kept nearly constantly under its influence. It had the effect of preventing the opisthotonic spasms, and causing her to sleep more or less during the day. When the effects passed off she would crave for more. The pulse also came down from 130 to 105.

"I visited the patient every hour during the day, and finding that the disease was so admirably controlled by the treatment, I flattered myself that she might yet recover from it. But in the evening the treatment began to lose its effect, and between eight and nine o'clock a violent spasm, lasting ten or fifteen minutes, came on, and which exhausted her a great deal. This was followed by a flagging pulse and labored breathing. I immediately ordered stimulating and nutritious injections and chloroform liniment to the spine to be associated with the anæsthetic. But successive paroxysms returned with great violence, which caused her to sink rapidly, and she died at 11½ o'clock P.M. of the same day."

Thirteenth case, reported by Mr. Bagunjee Dossabhoy, of Bombay. Early in the morning of the 24th of April, 1843, a Parsee* female, aged twenty-six, mother of four children (the youngest a year and a half old), in the third month of pregnancy, after suffering for several hours during the night from uterine pains, had hemorrhage to come on. The os uteri was dilated a very little. She was treated by dilute sulphuric acid and opium with cold applications ; but the pains and the discharge continued throughout the day, and at six P.M. an embryo was expelled. The pains then ceased, and the hemorrhage merged into the ordinary sanious discharge. On the 30th, difficulty in opening the jaws to the full extent was complained of ; but there were no other symptoms of tetanus until the 5th of May, when the abdomen became somewhat hard and tympanitic. No stiffness of any muscles except those of the jaws. The pulse continued at 100, small and compressible. She remained in this state until the 17th, when spasmodic contraction of the back and lower extremities came on ; and there was increased stiffness of the neck and abdomen. The pulse was 112, of same character as before. She was treated by hemp, quinine and generous diet, and recovered by the middle of June, menstruation having occurred at the usual period, but rather profusely.

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*A fire-worshipper—a numerous sect, residing near Surat and Bombay, India.

The forgoing comprise the cases, so far as I have been able to glean from various sources, occurring from or following abortion. I shall now proceed with those which have followed parturition. Of these, Dr. Simpson reports seventeen cases,* which are presented in a condensed form from his more detailed account.

The *first case*, post partum, was one of natural labor, the tetanic symptoms occurring in six days thereafter. Died in six days after the tetanic invasion. Child living.

The *second* in seventy-two hours after delivery. Laceration of vagina and perineum. Proved fatal in three days. Child died also with trismus and jaundice.

The *third case* did well for three or four weeks. Hemorrhage occurrred at the end of this time, which required the vagina to be plugged. Plug not removed for two or three days. On the sixth day after the advent of the hemorrhage, tetanic symptoms occurred. In three days she died.

The *fourth* was characterized by a natural labor and a large child. In endeavoring to remove the placenta, the cord broke near its connection with the former, which was unfortunately allowed to remain during five days. On the sixth a portion of the placenta was removed, and ergot produced the expulsion of two more decomposed and fetid masses. On the seventh, symptoms of trismus exhibited themselves, which in a short time ripened into tetanus. Opisthotonic spasms succeeded, attended with much suffering. In eight days after delivery she died.

The *fifth case.*—Patient had been exposed to cold. Suppresion of the lochia. Tetanic symptoms in four days after delivery, and died in three days after their supervention.

The *sixth case*—Improper exposure four days after delivery. Suppression of lochia. In twenty hours after, tetanic symptoms. Disease continued ten days, and finally yielded to repeated bleedings, leeches, musk and valerian.

The *seventh case* was that of a woman who was attacked with eclampsia at the seventh month of her pregnancy. In two days after was delivered of a dead fœtus. Five days after she drank largely of cold water. Shivering, trismus, and finally complete tetanus. Warm bath to restore the lochia, and blisters constituted the treatment. In forty days recovered.

The *eighth case.*—Sixteen days after confinement was exposed to cold. Suppression of lochia. Bleeding, leeches, and warm bath. Recovery.

The *ninth case.*—A fortnight after delivery, was exposed to cold. Same night, trismus. Next day, two or three tetanic spasms, and died.

The *tenth case.*—Trismus two days after delivery. Died.

The *eleventh case.*—Tetanus in a few days after birth of the child, and in five from tetanic symptoms, died.

The *twelfth case* was one of hemorrhage demanding version. In five days, tetanus. Died in a few hours after.

The *thirteenth* and *fourteenth cases.*—Tetanus followed Cæsarean section. Death in both cases.

The *fifteenth* was one in which a surgical operation had been performed, followed by hectic. In two months was delivered of twins, and in one week died from tetanus.

The *sixteenth case* was without particulars; and in

The *seventeenth* and *eighteenth cases* the causes were not specified, but death occurred in both cases.

To the foregoing from Dr. Simpson, the following are added, with more extended details:

The *nineteenth case* in this category is from M. Barbieri, of Italy, and published in the *Gazette Med. Ital. Toscana.*

The patient was thirty-two years of age, and robust until she had nursed her first child some weeks. The child died at ten months, up to which time the mother was much annoyed with twitchings of her feet and legs. Immediately after, the twitchings ceased.

A second child was born, and as soon as lactation commenced, the twitchings commenced also, extending this time to her thighs and loins. The child died in seven days, and with its death subsided her sufferings.

Thirteen months after this, again, another child was born, and as soon as the milk began to flow freely the spasms returned, and in this instance periodically, every tenth day, lasting twenty-four hours. In ten months the child died, and with its death the spasms again subsided.

Two subsequent confinements were followed by the same phenomena, in both of which the children were weaned when the spasms ceased. At date of report the woman was in excellent health.

The *twentieth case* has been furnished to the author by Dr. F. T, Hurxthal, of Massillon, Ohio. The patient was a lady of twenty years, who was confined with her first child in September, 1851. Labor natural and the child large. The labor had been somewhat protracted, owing to rigidity of soft structures. No unpleasant symptoms until the evening of the second day after parturition. Her husband observed about midnight that she could not articulate so as to be understood clearly. At daylight was called, when the following symptoms presented themselves: Decubitus, body inclining to one side (pleurothotonos); great anxiety of countenance; trismus complete; sense of hearing normal, as evinced by turning her eyes to the person speaking, but unable to turn her head; rigidity of muscles; retention of urine; pulse 140—small, quick and wiry; skin bathed in perspiration; lochia normal in quantity; the jaws resolutely closed, every attempt by prudent, forcible means to separate them proving futile. Compelled to rely upon endermic remedies, and others by enemata. To carry out the first, vesication by hot water, and the denuded surface dressed with morphia; bowels emptied by injections, and the bladder by the catheter. Blood was also drawn freely from the arm, but nothing done appeared to accomplish any good, or in any degree to mitigate the severity of the symptoms, when, after thirty hours, death, relentless in its demands, relieved her of her earthly pangs.

It appeared from subsequent information that this lady fell a few feet (about three) a few days before her confinement, the force of the fall having been upon the coccyx, at which time she assured others that she heard a "crack." To this was added the fact that the patient weighed 170 lbs., and a fracture suspected. If so, the case might have been regarded as one of the traumatic variety. But, as the labor was natural, would it have been so had there been fracture? It would have been readily detected by the greater tumor posteriorly formed by the head being forced in that direction, with a strong probability also of laceration of perineum.

In this, the force of the concussion, doubtless, and parturition were the exciting causes.

The foregoing shows the necessity and importance of further investigation, and as the author is informed that other cases have existed which have not been reported, he would respectfully invite reports of all cases as early as convenient, in detail, in order that they be added to those already given, and reported from time to time as voluntary contributions.—*Transactions of American Medical Association, Vol.* 15, 1864.

The State Lunatic Asylum, Austin, Texas.

While on a visit to Austin we were invited to visit this institution by Dr. W. P. Beall, the present Superintendent, and we spent a day at the institution. The building is a four story one, built on an irregular plan of architecture. It is neither a cross nor a pavilion, but consists of a series of buildings attached to the other after the order of a pavilion, and can be extended indefinitely, but produces many angles and corners, which is very objectionable. There are no artificial ventilations which I consider an absolute necessity in an Insane Asylum, as the patients have to be confined in their rooms or cells. The latrines, (necessaries, privies,) are also attached to the main buildings, which, by all means, should be outside of the walls and connected by iron corridors. The privies are in bad repair, as is seen from the Doctor's report. The Legislature has made appropriation for various repairs and for the purchase of adjoining grounds for the taking care of freedmen. There is a large and extensive garden and a well laid off yard, filled with trees and flowering plants. Dr. Beall is at present assisted by Dr. Graham, the former Superintendent. They are both gentlemen well qualified for their position and are doing everything in their power to make it a first-class hospital. We insert the Manager's Report for 1866, Superintendent's Report, 1866, and Dr. Graham's Report, and also the forms to be observed by courts, judges, and physicians in sending patients to the Asylum. We publish this that our physicians may know how to send this class of unfortunates to the institution. The State pays, as you will see, all expenses over and above a nominal one by the counties and private parties able to pay. We recommend every physician to file these reports where they can find them, for they do not know what day they may be called on for advice and certificates. There are a great many in the various counties that ought to be there where they can be taken care of, and I regret to learn that the buildings are nearly full, but I hope and believe the State will enlarge the building and the objections to style be removed, especially in reference to ventilation and the privies. We also suggested to the Managers to take and keep a more accurate description of their ages, color of hair, skin, eyes, weight, and time of life at which the insanity occurred. It is a well know fact persons of peculiar colored eyes, hair, and skin, not to speak of temperament, are more prone to insanity than others, and we give below a table from the report of the New York city Lunatic Asylum for 1864, p. 97, showing these facts in that institution:

COLOR OF HAIR AND EYES OF PATIENTS ADMITTED IN 1864.

COLOR OF HAIR		COLOR OF EYES.	
Brown or Chestnut	216	Brown	110
Black	75	Blue	137
Gray or White	42	Gray or White	85
Sandy	26	Hazel	19
Red	4	Black	15
Auburn	3		
Flaxen	1		
Total	366	Total	366

All such facts are of great importance to the physiologist and hyigeinist, and should be regarded in forming marriage connections, as insanity is well known to be hereditary. Texas has ample means and should not spare any pains or expense to make this and the Deaf and Dumb and Blind Asylum equal to any in the world. Hon. J. W. Throckmorton, the present Governor, is by profession a physician, and we look to him for many measures for the improvement and advancement of our profession. We regret much that the Law of Registry did not receive a more favorable reception before the Legislature. We will publish it for our physicians to reflect on and endeavor to have one passed at the next session. Certainly no State in the world needs a general registry more than this State, where the statutes of limitation become in many cases the most important of all our laws, and we well know that private records are often changed and many times neglected entirely, and, though our population is sparse, such a law is practicable and, in our estimation, invaluable to the State.

MANAGERS' REPORT.

State Lunatic Asylum,
Austin, Texas, Aug. 10, 1866.

To His Excellency, the Governor of the State of Texas:

We, the Managers of the Texas State Lunatic Asylum, would respectfully transmit herewith the report of the Superintendent, Dr. B.

Graham, which exhibits a full statement of the operations of the Institution since August 10, 1865, the number of its lunatics, discharges, cures, &c., from which it will appear that notwithstanding the many unavoidable and embarrassing circumstances incident to the successful management of an Asylum, we are happy to find so large a percentage of cures, and to have the Institution in so prosperous a condition. The interests of this establishment, the home of so large a family of sufferers, appeal strongly to the feelings of all, and render it especially incumbent upon those in any way connected with the administration of its affairs, to be vigilant and faithful to their trusts. With this feeling, the Managers have maintained a close supervision of its affairs, and satisfied themselves that the Institution has been conducted upon principles of justice and economy, and that all has been done that could in any wise contribute to its benificent ends. It is believed that the people of the State generally, desire information in reference to this Institution, respecting its management, general condition, &c. We therefore respectfully ask that your Excellency lay before the Legislature the the report of the Superintendent, Dr. B. Graham, with the request that they print, and distribute the same among the citizens.

GEO. HANCOCK,
E. B. TURNER,
J. M. LITTEN,
M. A. TAYLOR.

MANAGERS' REPORT.

LUNATIC ASYLUM,
October 1st, A.D., 1866.

To His Excellency, Jas. W. Throckmorton, Governor of the State of Texas:

The Board of Managers for the Texas State Lunatic Asylum, in compliance with the statute which requires from them an annual report of the "condition and wants" of this Institution, would respectfully report as follows:

This Institution is now in a most prosperous condition, fulfilling the beneficent purposes for which it was established. Forty-eight patients are now partaking of its benefits. Economy is observed, and cleanliness maintained in every department. The patients are generally orderly and quiet, which is, no doubt, owing largely to the mild and rational treatment they receive.

The arrangements in all the departments of its government are wise and calculated to result in the most favorable effects to the comfort and restoration of its inmates. The building, with the repairs hereafter indicated, will be healthy and pleasant. The grounds, most tastefully arranged with walks, shade trees, shrubbery and flowers, are in a fine state of care and cultivation. The garden and orchard are well attended, and give bountiful yield. The lawn, well cleared of undergrowth and brush, and set with grass, affords fine space for the recreation of the patients.

The wants of the Institution consist especially in repairs to the ro of the building, repairs in the water closets, and in the renovating and enlarging of the sewers.

An additional building for freedmen will be much needed.

A hall, thirty feet by forty, one story high, for a chapel, reading and lecture room, would be an addition of the first importance to the Institution.

After the report of the Committee from the Legislature on the "Condition of the Asylum," which has, no doubt, come to the eye of your Excellency, and after the elaborate report of the Superintendent, we deem it needless to add more.

Respectfully,

JAMES P. NEAL,
FRAS. T. DUFFAU.
W. A. MORRIS.

SUPERINTENDENT'S REPORT.

STATE LUNATIC ASYLUM,
October 1st, 1866.

To His Excellency, J. W. Throckmorton, Governor of the State of Texas:

In compliance with the law organizing the State Lunatic Asylum, the Superintendent has the honor to submit his first annual report. The number of patients in the Asylum, on the 21st of August, at which time I took charge of the Institution, was 27 males and 26 females, the whole number under treatment at that time being 53; of this number five males have been discharged, of whom four were cured, and one unimproved, a non-resident of the State, leaving under treatment at the present time 22 males and 26 females, the whole number being forty-eight. For particulars during the past year, I would respectfully refer to the report of Dr. Graham, late Superintendent, which contains a full account of the affairs and operations of the Institution during the Provisional Government. The Asylum at present seems crowded to its limit of accomodation. Happily it is exempt from all epidemic diseases, and the Institution is successful and prosperous in all its departments. During the interval which occurred from the 10th of August last, the date of the late Superintendent's report, up to the 20th of the same month, when I took possession, the expenses of the Institution amounted to $504.12, which amount, with the accompanying vouchers, were examined, and allowed by the recently appointed Board of Managers, and was paid out of a balance remaining in the hands of the late Superintendent, appropriated by the Provisional Governor, after which there was still a balance of $551.15 of the same fund, which amount, upon settlement with the Treasurer, he deposited, taking his (Treasurer's) receipt therefor, and to which settlement the Doctor invites attention. Since my incumbency, the 20th August, there has been no appropriation for the support of this institution, and it has, and is still being sustained upon the credit of the State. The liabilities incurred during said interval, including officers' salaries and employees, now due, amount to the sum of $2001.46, specie. No payments by counties or patients have been made since my appointment, although I find that counties and pay patients owe the State the sum of $8742.60 for board, care clothing, &c.; and in this connection, I would call attention to the importance of adopting measures by which these claims can be promptly collected. Several counties each owe the State between the sums of five and six hundred dollars in specie. A variety of improvements and repairs are necessary to make the Institution what it should be, and although I will not at present undertake to enumerate any, yet I would respectfully call attention to those suggested in the late Superintendent's report of August last; and in this connection I may say that I have every confidence the present Legislature will inform themselves in relation to the wants of the Institution, and provide as liberally for the same as they may deem proper. Probably in no State is the standard of public sentiment higher than in the State of Texas, and to maintain the public confidence, the increase and facilities for the care and treatment of the insane must keep pace with the demand for their accommodation, they being a class of human beings calling more loudly upon our charity and sympathies than any others. Commending the Institution in all its varied wants and interests, to your continued oversight, and to the fostering care of the Legislature, and feeling thankful for the good that has been heretofore accomplished, with a firm trust upon that Providence which blesses every honest effort to do good, we enter upon the duties of the coming year.

W. P. BEALL, M. D.,
Superintendent Lunatic Asylum.
By B. GRAHAM, M. D.,
Ex Officio Superintendent Lunatic Asylum.

DR. GRAHAM'S REPORT.

To the Hon. E. M. Pease, George Hancock, E. B. Turner, Dr. J. M Litten, and Dr. M. A. Taylor, Managers of the Texas State Lunatic Asylum:

GENTLEMEN:

The following report of the Superintendent of the Texas State Lunatic Asylum is herewith respectfully submitted. In it I propose to give its current history since my reappointment to the office of Superintendent on the 10th of August last, together with its progress and present condition. I desire you to transmit it to the Executive, requesting him to lay it before both branches of the Legislature, at an early day.

	MALES	FEMALES	TOTAL.
Patients in the Asylum August 10, 1865	24	24	48
Admitted during the year	23	17	40
Whole number under treatment	47	41	88
Discharged, recovered	14	8	22
" improved	2	4	6
" unimproved	3	2	5
Died	—	1	1
Remaining in the Asylum	28	26	54

From this statement, it will be seen that, during my present incumbency, eighty-eight insane persons have been under treatment in the Asylum. Of this number, forty were admitted, thirty-four discharged, and one died, leaving fifty-four patients in the Asylum. Of those discharged, twenty-two had recovered, six improved, and five unimproved. The Institution is now crowded to its utmost capacity, as not more than fifty can be accommodated with any degree of comfort, and even then we are compelled to associate several in a room together. Having but three wards, we are totally unable to secure that system of classification which is so necessary both to the comfort and successful treatment in an Insane Hospital. During the past year trying difficulties have environed us. The change in our labor system, which has so effected the industrial interest of the South, has fallen with peculiar weight upon our Institution. I have found it very hard to obtain reliable labor, either black or white. Nothing can be of more importance in an asylum for the insane than to secure and keep experienced and faithful employees, and this has been impossible during the past year. Blacks have been found, in many instances, unable to bear with moderation the change in their condition, and whites have often been unwilling to perform those menial services so necessary about an Institution like ours. These, and other difficulties, meeting us at the very threshold, almost made us despair, yet we have passed through without serious accident, and the foregoing statement of cures will show that our Asylum, as an ameliorating and curative agent, has not failed in its object. In view of the results accomplished, we look back with gratitude to the " Author of every good and perfect gift," feeling that our measure of success is satisfactory.

In a tabular view at the close of this report, will be found a statement of the results and particulars in regard to cases under treatment during the past year. We have endeavored, as far as practicable, to restrict the admission of patients to that class to which the law gives preference, viz., those of less than one year's duration of insanity. Notwithstanding our efforts, a majority of those admitted have been chronic cases; and most of those whom I found in the Asylum when I entered it, were of a similar character.

The experience of all medical Superintendents agree that few cases of insanity of more than one year's duration recover. This class of cases, however, while they cannot be generally cured, are entirely fit subjects for the treatment and care of an insane hospital. Their habits, if properly treated, may be much improved; and their removal from home is absolutely necessary, not only for their own welfare, but for the peace of their friends and of society. All cases of insanity generally require treatment away from their families, because of the propensities, habits and disquietude of the patient. It is also absolutely true that many persons laboring under mental alienation are much happier away from their friends than with them. Constant appeals are being made for asylum accommodations for idiots and lunatics of all grades, and this demand is greatly in excess of the provision made for it. Some dissatisfaction has, and will continue to arise, from this cause, on the part of those not accommodated. I have in all such cases endeavored to take the law for my guide; and when this has been complied with, by those asking admission, I have not sent them away. I have not, however, felt at liberty to make the Asylum a home for harmless idiots, as our statute has not provided for such cases. The law has, in the first place, wisely made provision for cases of insanity of less than one year's duration, as this stage is supposed curable. After having first accommodated this class, I have next admitted the most refractory and dangerous, rather than the inoffensive idiot and hopeless epileptic. In doing this, I feel that I am carrying out the law in its letter and spirit. It is proper to remark, in this connection, that this unnecessary accumulation of incurables depends much upon the unwise policy of friends in keeping the subjects as long as possible at home, and then sending them to the Institution for treatment. The opposite course should be practiced, and would relieve the public from the constantly increasing care and burthen of incurable cases of insanity. If such delay were practiced in other diseases less terrible than insanity in character and consequences, what a fearful result would the tables of mortality everywhere present! Could this mental alienation receive prompt and correct diagnosis and treatment in its incipient stages, is it no fair to presume the results would be far more auspicious? The very limited provision made for the care of the insane in this State, will, it is to be hoped, soon give way to a more just and comprehensive system—one more in accordance with the civilization of our age, and the better feelings of our nature. From the most reliable information I can obtain, there cannot be less than between five and six hundred lunatics and idiots in this State. This unfortunate class of persons call loudly, perhaps more loudly, upon our charity and sympathy than any other. Kind attention bestowed upon these poor unfortunates, in a well regulated hospital, with all the proper appliances for treatment, will do more to cure them than all the remedial agents without these advantages could do.

I have frequently been inquired of in reference to the influence which the late war has exerted upon mental disorders. In reply, I would briefly say that the most distinguished writers upon these subjects agree that mental disorders receive a marked impetus from the cause above alluded to. Thousands of persons have been driven from their homes in poverty and distress; family ties have been rudely sundered; domestic afflictions of every kind have been suffered; what causes let me ask, more potent than these to drive the mind from a normal condition? Almost every mail bears applications for admission to our Asylum. In the wisdom and benificence of the present Legislature, I have every confidence, and trust that measures will be taken to inaugurate a system more in accordance with the wants of the unfortunate class of our fellow citizens who are knocking so loudly at our doors.

Some legislation may be deemed necessary in reference to insane negroes. I have recently been informed of several cases, one or two of whom are now in county jails. Inquiry has been made of me, as to whether they could be admitted as patients in this Institution. To such interrogatories, I have given an invariable negative, although there is no special enactment debarring them from the privilege. Should it be deemed advisable to make provision for such cases, a separate building should be prepared for their reception, in order that no compulsory association between the two races might exist. Should such persons be placed under my charge, I should, of course, give them the same attention and treatment as others receive.

The difference between the white and the black races in regard to mental disease is very great, the number of the latter who are thus afflicted bearing a very small proportion to the former. Consequently, if it should be deemed advisable to make provision for insane negroes, not much would be required. It is not my present intention to enumerate particularly the deficiencies and wants of the Institution; I must be permitted, however, to call attention to some changes and improvements, which are almost indispensable to keeping it in working order. On taking charge last summer, and inspecting the general condition of the building, the roofing was found very defective; the leakage was so great during a heavy rain, that all the available labor in the house was called into requisition to keep the water bailed out, and to prevent the plastering from falling off, and other serious damage to the building. The bath rooms were also very imperfect, much of the zinc covering then having become worn out, and detached by use and age. The water closets were, and still are, also in a very defective state; the sewers are entirely too small, and there are no pipes to convey the water necessary to clean the waste pipes; it is therefore necessary to carry all the water required for this purpose by hand, in buckets, thereby causing much additional labor. Unless the utmost precaution is constantly paid to the cleansing of these pipes the liquid contents will gradually ooze through the floor and ceiling, causing great injury and inconvenience. Some of the defects above alluded to have been temporarily remedied by repairs and constant attention. The roof has been much improved, but still leaks badly during a heavy rain. The bath room floors have been made perfect, either by covering them with new zinc, or repairing the old. A systematic and thorough removal of the defects, which exist in the building has not been attempted, neither the material, labor nor means being at the command of the Superintendent to accomplish it. Much of the time of the Superintendent is unavoidably occupied in the general supervision of the entire establishment, and a multitude of minor matters claim his attention, and cannot be delegated to others. This has been particularly the case during the last year, and even had the means been at the control of the Superintendent, it would have been impossible for him to have accomplished a thorough repair of the building. During a crisis such as we have just passed through, it has been exceedingly difficult to procure reliable labor. I have found it necessary to make frequent changes among the employees, either from gross neglect of duty on their part, or failure to carry out the regulations adopted by the managers, without which all system would be impossible. Notwithstanding the anxiety and care growing out of the dissatisfaction thus caused, and other embarrassing circumstances, we have the gratification of knowing that the record of our success will compare favorably with that of any similar Institution.

Much is necessary to make the Asylum such as the wants of the State demand. It is probably impossible at the present time, either greatly to enlarge the present building, or erect expensive new ones. Some additional facilities for the amusement of the patients should at least be added. Such useful employments as are calculated to exercise, and develop at once, the mental and physical powers, are of the highest advantage to the insane. Our vegetable and flower gardens afford us the only occupation of this kind. Amusements and entertainments exert a most happy influence upon the insane, causing them for a time to forget their melancholy thoughts and harrassing emotions. Anything which can fix the attention of the mind, to the exclusion of morbid ideas, may be a means of its restoration to health. Religious service exerts a most happy influence upon the mind of many insane persons; and in this connection, I take occasion to acknowledge our indebtedness to Rev. Mr Roud, of the Iowa Volunteers, lately stationed at this point, for ministrations last winter; and also to Rev. T. McRhea, for several visits of a similar nature this summer. Musical entertainments perhaps contribute as much to the gratification and improvement of many cases of insanity as any other means which can be resorted to. This has been the principal means of enjoyment we have been able to afford them. They have been frequently assembled for the purpose of of listening to vocal and instrumental music; and those of them who wish to do so, have been encouraged to take a part in the exercises. Dancing has also been resorted to, and is a source of much delight to many of the patients, but our facilities for this amusement are very much limited, having no room suitable for the purpose. A hall of sufficient dimensions, in which all the inmates of the Asylum could be assembled, for the purpose of listening to religious services, or lectures upon various subjects, or to use as a reading room, or for music and dancing, would be of great advantage to the Institution. *It is indeed indispensable.* To this I take the liberty of calling your particular attention, and while I do not at the same time suggest any extensive improvements, I would respectfully urge upon the Executive and present Legislature, the importance of erecting a spacious hall for these purposes: such a building can be erected at a moderate expense. The objection to a separate building will disappear, when it is considered that it will be probably some years before the original plan of the structure will be carried out. Such a building as is suggested, being apart from the main building, would also afford secure hospital accommodations in case of the sudden visit of a formidable epidemic. It is also suggested that if a suitable building were provided for the Superintendent, either within the grounds, or in the immediate vicinity, the rooms now occupied by him might, by a little judicious alteration, be made to accommodate eight or ten additional patients. The defects above alluded to and the improvements suggested, are not for the purpose of urging any extended changes at this time, but that a fair understanding may be had as to the present wants of the Asylum. Our garden has, and still continues to supply us with an abundant amount of vegetables, for the use of the entire house, winter and summer, not having been under the necessity of purchasing a dollar's worth; we have sold an amount sufficient to furnish us with seed Irish potatoes, and such other seed as were needed, and we have still a small balance of the garden fund on hand.

Statement of the amount collected from and still due by counties and private parties :

	SPECIE.	U. S. CUR.
Since the 10th day of August, 1865, there has been collected by the State from counties and pay patients for the care and maintenance of their insane	$3,949.21	$1,762.10
There is still due the State from counties and pay patients, near the sum of	8,000.00	
Of the indebtedness due the State from counties and pay patients, Travis county owed	327.41	

For which the Chief Justice of said county issued county warrants, at their relative value, say 75 cents per $1, making $436.54, the same made payable to the Lunatic Asylum, and the said warrants are now in possession of the Superintendent.

There has been during the same time drawn from the State Treasury for the support of the Asylum an appropriation made by the Provisional Governor Hamilton $7,633.33 specie, and $22.50 United States Currency, making, together with the amounts above enumerated, an aggregate of $11,582.54 specie, and $4,012.10 United States Currency, which has been expended during the last year for the support of the Asylum, except the sum of $993.94 specie, now on hand with the Superintendent. The Institution is free of all debt incurred during my incumbency; everything being paid up to the 10th day of August, 1866, a period of twelve months. All papers and vouchers relating to this matter are on file in the Treasury Department, and to them I respectfully invite your attention. During the month of October, 1865, the Institution was, upon the order of Provisional Governor Hamilton, furnished with two thousand yards of osnaburgs, and one thousand yards white woolen jeans from the State Penitentiary—the Asylum at the time being almost destitute of mattresses, bed clothing, &c. The following disposition was made of this cloth:—There has been made into mattresses, pillows, towels, pillow-slips, sheets, ladies' and gentlemen's garments, and appropriately changed, about eight hundred yards osnaburgs; there has also been made into ladies' and gentlemen's garments, and appropriately changed, about two hundred yards white woolen jeans. There has been exchanged for such goods as were needed for spring and summer use of patients, consisting of prints, denims, hickory stripe, domestic, &c., about five hundred yards of osnaburgs and two hundred yards of jeans. The balance of the cloth is still on hand. In closing this brief report I desire to express my thanks to Dr. John Walker, who has zealously and efficiently performed the services devolving on him as Assistant Physician ; he has the well wishes of all with whom he has been associated. To the members of the Board of Managers I would also return my thanks for the uniform kindness and consideration shown me, and for their well directed efforts, and great assistance in favor of the Institution and its unfortunate inmates.

Respectfully submitted,

B. GRAHAM, M. D.,
Superintendent Lunatic Asylum.

ADMISSIONS, DISCHARGES AND DEATHS.

	MALES	FEMALES	TOTAL
Number of patients, August 10th, 1865	24	24	48
Number admitted during the year	23	17	40
Whole number under treatment	47	41	88
Discharged, cured	14	8	22
Discharged, improved	2	4	6
Discharged, unimproved	3	2	5
Died		1	1
Whole number discharged	19	15	34
Remaining in the Asylum	28	26	54

CIVIL CONDITION OF THOSE ADMITTED.

	MALES	FEMALES	TOTAL
Single	26	10	36
Married	17	15	32
Widowers and Widows	4	16	20
Total	47	41	88

NATIVITY OF THOSE ADMITTED.

	MALES	FEMALES	TOTAL		MALES	FEMALES	TOTAL
Texas	6	4	10	Virginia	2	1	3
Tennessee	7	7	14	Maine	2		2
Alabama	6	1	7	New York	2		2
North Carolina	1	3	4	Louisiana	2		2
Missouri	2	3	5	New Jersey	1	1	1
Kentucky	2	2	4	Ohio	1		1
Georgia	2		2	South Carolina	1		1
Arkansas	1	1	2	Connecticut		2	2
Mississippi	1		1	Ireland	2	2	4
West Indies	1		1	Italy	1		1
England	1		1	Germany	4	12	16
Norway		1	1				
Denmark		1	1	Total	47	41	88

FORM OF INSANITY OF THOSE UNDER TREATMENT DURING THE YEAR.

	MALES.	FEMALES	TOTAL		MALES	FEMALES	TOTAL
Dementia	5	1	6	Simplicity	1		1
Monomania	3	3	6	Idiotic	1		1
Mania chronic	8	10	18	Moral insanity	2	1	3
Mania acute	9	11	20	Monomania of fear		2	2
Mania with epilepsy	3	2	5	Monomania of pride		1	1
Mania periodical		2	2	Suicidal	4		4
Mania puerperal		2	2	Instinctive madness	1	1	2
Melancholia	9	5	14				
Monomania, suspicion	1		1	Total	47	41	88

FORMER RESIDENCE, AS STATED ON ADMISSION.

	MALES	FEMALES	TOTAL		MALES	FEMALES	TOTAL
Travis county	2	2	4	Red River county	1	1	2
Cooke county	1		1	Collin county	1	1	2
Washington county	1	3	4	Bexar county	5	4	9
Calhoun county		1	1	Colorado county	1	3	4
Rusk county	2		2	Harris county	2	4	6
Milam county		1	1	Panola county	1		1
Denton county		1	1	Mason county	1		1
Caldwell county	3	1	4	Parker county	2		2
Live Oak county	1	1	2	Burleson county	1	3	4
Bastrop county	1	1	2	Houston county	2		2
Bell county	1		1	Polk county		1	1
Victoria county		1	1	Austin county	1		1
Fannin county	1	1	2	Lamar county	1		1
Wilson county	1	1	2	Medina county		1	1
Cameron county	1		1	Fort Bend county	1	1	2
Galveston county		1	1	DeWitt county	1		1
Davis county	1		1	Burnett county	2	1	3
Comal county	1		1	Fayette county		2	2
Tarrant county	2		2	San Patricio county	1		1
Smith county	1		1	Caddo parish, La.	1		1
Anderson county		2	2	Brooklyn, New York	1		1
McLennan county		1	1				
Grayson county	1	1	2	Total	47	41	88

LUNATIC ASYLUM.

LAW IN RELATION THERETO

SECTION 1. The Governor shall appoint five Managers for the State Lunatic Asylum, who shall be citizens of the State. Of those first appointed one shall serve one year, one two years, one three years, and two four years, and their successors shall be appointed for a term of four years, or in case of vacancy during a term, for the unexpired term,

SEC. 2. The Managers shall serve without compensation. They shall have general direction and control of the property and business of the Asylum. They shall have power to make, with the approval of the Governor, all necessary by-laws and regulations (not inconsistent with the laws of the State) for the government of the Institution and of its officers employees and inmates, and for the admission of visitors. They shall prescribe the duties of all persons employed about the Asylum, and determine their salaries, except in cases specially provided for by law; and may at pleasure discharge any person or officer in the Asylum, except the Superintendent. They may, with the concurrence of the Superintendent, appoint an Assistant Physician. They may take and hold in trust any gift or devise of real or personal estate for the benefit of the Asylum, and shall make such application thereof as the donor or devisor may prescribe. They shall examine the accounts and vouchers of the Superindent, and approve of such as may be necessary and proper. They shall exercise a careful supervision over the general operations and expenditures of the Asylum, and direct the manner in which its revenues shall be disbursed.

SEC. 3 The Managers shall hold quarterly meetings at the Asylum, when a majority shall constitute a quorum for the transaction of its business. One or more of the Managers shall visit the Asylum and inspect the same once in every month, or oftener; and they shall keep a full account of their visits and proceedings in a book to be provided for the purpose, and shall make a report to the Governor on the first day of October of each year, setting forth the condition and wants of the Institution.

SEC. 4. The Treasurer of the State shall act as Treasurer of the Asylum, and shall collect all its dues, and pay out its revenues only in conformity with the laws of the State, and the by-laws of the Institution, and he and the sureties on his official bond shall be liable for any violation or neglect of duty. He shall make a report to the Governor of the condition of its finances and expenditures, on the first day of October of each year.

SEC. 5. The Superintendent shall be a married man and a skillful physician, experienced in the treatment of the insane. He shall continue in office for the term of four years from the time of his appointment, unless sooner removed by the Governor for incompetency, refusal to discharge any of his duties, or for any misconduct on his part, which might render it improper for him to continue longer in office. He shall reside in the Asylum with his family when required to do so by the Managers.

SEC. 6. The Superintendent shall be the Chief Executive and Medical Officer of the Asylum, and shall (subject to the by-laws) have care and control over everything connected therewith. He shall attend to the enforcement of the laws and by-laws, and see that all persons connected with the Institution faithfully and diligently perform the duties assigned them. He shall, with the consent of the Managers, employ such officers, attendants and other persons as may be required for the service of the Institution, and may at pleasure discharge them. He shall receive and discharge patients, and shall annually, by the first of October, cause an inventory of all the property belonging to the Asylum to be made out, with an estimate of the value of each article, and submit the same to the Managers. He shall be ex-officio Secretary of the Board of Managers, and shall superintend repairs and improvements, and see that the money entrusted to him is properly and economically expended, and shall keep an accurate account of the same. He shall be the responsible disbursing officer of the Institution, and shall give bond for the faithful performance of his duties, made payable to the State, in the sum of ten thousand dollars, with two or more sufficient sureties, to be approved by the Treasurer.

SEC. 7. The Superintendent shall keep a register of all patients received and discharged, and of the operations of the Asylum, which may be required by the by-laws, and report the general results to the Governor, on the first day of October of each year.

SEC. 8. If information in writing be given to any Chief Justice of a county, that any person in his county is an idiot, or lunatic, or *non compos mentis*, and that the welfare of himself or of others requires that he be placed under restraint, and said Chief Justice shall believe such information to be true, he shall order such person to be brought before him, and twelve competent jurors of the county to be summoned, who shall be sworn to inquire and a true verdict render, whether such person be of sound mind or not; whereupon the matter shall be tried, and if the jury shall return a verdict that the person is not of sound mind, and that he should be placed under restraint, the same shall be recorded and the Chief Justice shall thereupon order him to be sent to the Lunatic Asylum, unless some friend, (to whom the Chief Justice, in his discretion, may deliver such person) will give bond, payable to the State, with sufficient security, to be approved by said Chief Justice, with the condition to restrain and take care of such person, until the cause of confinement shall cease, or he is delivered to the Sheriff of the county, or other person, to be proceeded with according to law. Upon the trial and inquiry herein provided for, the examination of the insane, and the testimony of the witnesses, shall be reduced to writing and filed. The proceedings of the Chief Justice, in relation to insane persons, shall be minuted in the record of his court appertaining to estates of deceased persons, &c.

SEC. 9. It shall be the duty of the Chief Justice, on ordering a person to be sent to the Asylum, to ascertain,

1. The number of his family, if he has one, and their ability to maintain themselves;
2. The value of his estate, if any; and,
3. The ability of persons legally liable for his support. And he shall make an order specifying the amount which his guardian, if any, shall pay out of the estate of such person, for his support in the Asylum; and shall cause a minute to be made of the facts ascertained.

SEC. 10. Before sending a patient to the Asylum, the Chief Justice shall, without delay, cause authenticated copies to be made of the proceedings, evidence and decree of the original inquisition, and of the record of all subsequent inquisitions and orders, to be forwarded by mail to the Superintendent of the Lunatic Asylum; and in all cases, except those of great emergency, shall, before sending said person, ascertain from the Superintendent, by application, in writing, that there is a vacancy, and that the officers of the Asylum cannot send for him. Thereupon, the Chief Justice shall issue to the Sheriff, or other suitable individual, ordering him to convey said person to the Asylum without delay; and when satisfied of the necessity for assistants, he shall prescribe in such warrant the number to be allowed, which in no case shall exceed two; and he shall see that the patient is provided with two good and full suits of summer, and one of winter clothing.

SEC. 11. If any person charged with, or convicted of, any criminal offence, be found to be insane in the court before which he is so charged or convicted, said court shall order him to be conveyed to, and retained in, the State Lunatic Asylum; and he shall be received and retained, until removed by order of the court by which he was committed to the Asylum.

SEC. 12. No idiot who can be safely kept in the county to which he belongs, nor any person laboring under a contagious or infectious disease, shall be sent to the Asylum.

SEC. 13. Any person may be admitted into, and retained in, the Asylum as a patient:

1. Upon the order of any court or judge authorized to send persons to the Asylum.
2. Upon the written request of his legal guardian, near relative, or friend, if he has no guardian, or of the persons or of counties that may be legally liable for support. Such request shall set forth the name, age and residence of the persons for whom admission is requested, and such other particulars of the case as may be required by the Managers, and shall be signed under oath, and accompanied with a certificate, dated within two months, under oath, signed by one respectable physician, of the fact of his being insane, and also a certificate from the Chief Justice of the county, as to the respectability of the physician so certifying: *provided*, that for private patients the friends shall pay six months board, always in advance, and give such bond and security for the payment of the expenses of such patient, as may from time to time be required by the by-laws of the Asylum.

SEC. 14. If application shall be made for the admission of more patients than can be received in the Asylum, preferences, in all instances, shall be given to those made under order of court over private applications; and of the former, to those for cases of less than one year's duration over chronic cases.

Sec. 15. Any patient except such as have been committed under the provisions of the eleventh section of this act, may be discharged upon the recommendation of the Superintendent, approved by two of the Managers. Incurable and harmless patients, and such others as the Superintendent may deem proper, may in like manner be discharged whenever it is necessary to make room for recent cases, or when, for any other cause, it may seem expedient.

Sec. 16. When the patient is discharged uncured, the Superintendent shall see that a suitable guard is provided to carry him to his friends, or to the county from which he was sent. No patient shall be discharged without suitable clothing, or without money to pay his necessary expenses home.

Sec. 17. The amount to be paid for the board of patients admitted into the Hospital, shall be at the rate of two dollars per week for each person supported by the county, and for every other person that the Managers may find not to be possessed of estate sufficient to support him and his family, (or if he has no family himself,) under the visitation of insanity, or that the persons legally liable for his support are in indigent circumstances. For all other persons the Superintendent may make a special contract, at the rate of not less than five dollars per week. In all cases, the expense of removing the patient from the Asylum home, and for the necessary clothing with which he shall be furnished by the Asylum, if not otherwise provided, shall be extra charges. The expense of persons committed under the eleventh section of this act, shall be defrayed by the State, and the excess of the expenses of those committed by order of the court, and of other patients, over and above what is required in the foregoing rates, shall in like manner be defrayed by the State.

Sec. 18. The expenses of clothing, maintenance in the Asylum, and removal home therefrom, of every person received upon the order of any Chief Justice, shall be paid by the Treasurer of the county from which he was sent, when and as they become due and payable, according to the by-laws of the Asylum. And the County Court shall have the right to require every individual legally liable for the support of such patient, to reimburse the amount so paid, with interest from the time of paying the same.

Sec. 19. No person of unsound mind, who is unable to support himself, shall become chargeable to any county, unless he has acquired a legal settlement therein, and shall not be deemed to have acquired such settlement, unless he shall have resided one year in the State, and six months in the county. When any person of unsound mind shall come into the county, who is likely to become chargeable thereto, the Chief Justice of such county may, by warrant, cause such person to be removed to the county wherein he was last legally settled, unless he be so sick or disabled that he cannot be removed without danger of life, in which case he shall be provided for at the expense of the county wherein he is, until he can be so removed.

Sec. 20. It shall be the duty of the County Court of each county, that shall be chargeable with the support of one or more persons of unsound mind, to make provision therefor in its annual levy of the county tax.

SEC. 21. If any patient confined in the Asylum shall escape therefrom, it shall be the duty of the Sheriff of any county, in which he may be found, to apprehend him; and if required by the Superintendent or Chief Justice, to take him back to the Asylum.

SEC. 22. The officer complying with the order of the Court, or the Superintendent, in carrying a patient to the Asylum, shall, on presentation of the proper vouchers, be paid out of the treasury of the Asylum, at the rate of ten cents per mile for himself and each guard, (authorized by the court) going and returning, besides tolls and ferriages, and the same for the patient going.

SEC. 23. No Manager or other person connected with the Institution shall sell any article to the Asylum, or have any interest in any contract therewith.

NOTE.—The Eleventh Legislature altered the title of "Chief Justice," of the several counties in the State to that of "County Judge."

LUNATIC ASYLUM, Oct. 19, 1866.

To the County Judges in the different Counties, and persons responsible for the support of patients in the Texas State Lunatic Asylum:

It will be seen, by reference to the laws governing this Institution, that counties must make payments for patients *quarterly*, *in advance*, and that the friends of private patients should *pay in advance for six months.* The amount required in each case is plainly set forth. The accompanying table shows the indebtedness for board, care, clothing, &c., of each county and private patient, many of whom, it will be seen, are in arrears for years, and notwithstanding the frequent appeals that have been made, have remained silent. At a meeting of the Board of Managers, July the 2d, 1866, it was resolved: "That notice should be given to the County Judge of each county, and persons responsible for private patients, of the amount of their arrearages, and if not responded to by payment of the same in *thirty days*, the patients should be returned to their homes." At a recent meeting of the present Board, it was determined that additional notice should be given to parties concerned, and that a strict compliance with law must be enforced. I have, therefore, deemed it proper to notify all persons concerned of the amount of their indebtedness to this institution, and give such other information on the subject as would be of general interest, trusting no further steps will be required on the part of the Superintendent to enforce prompt payment.

Very respectfully,
W. P. BEALL, M. D.,
Superintendent Lunatic Asylum.

STATEMENT of the Indebtedness of Counties and Private Individuals to the State Lunatic Asylum, as shown upon the Books of this Institution, October 19, 1866.

COUNTIES AND PERSONS RESPONSIBLE.	AMOUNT IN SPECIE.	
	DOLL.	CT.
Anderson county	610	17
Austin county	30	00
Bastrop county	58	50
Baker, Samuel H., Caldwell county	65	00
Bexar county	184	73
Burleson county	260	00
Caldwell county	39	51
Calhoun county	352	45
Collin county	327	25
Colorado county	301	75
Cooke county	126	84
Comal county	174	45
Davis county	356	25
Denton county	142	26
Due, James W. Fayette county	1	50
Fannin county	65	09
Estate of J. W. Fannin, deceased	515	05
Fort Bend county	330	95
Galveston county	84	00
Guadaloupe county	1	50
Harris county	140	75
House, T. W., Houston	121	25
Houston county	26	00
Jones, Samuel P., Houston county	131	75
Medina county	26	00
Mason county	116	00
Milam county	164	55
McCutcheon, W. L., Louisiana	712	30
Parker county	541	40
Panola county	163	75
Polk county	143	25
Price, James H., Washington county	467	00
Red River county	687	90
Rusk county	435	00
State of Texas, for one patient, a non-resident of the State, admitted by order of Provisional Gov. Hamilton	67	45
Shirley, Dr. Jno., Grayson county	147	80
Smith county	213	70
Tarrant county	213	30
Travis county	57	25
Washington county	269	91
Wortham, Dr. J. W., McLennan county	269	62
Total in specie	8,902	69

PHYSICIAN'S CERTIFICATE.

I, ———, a practicing physician of the town or county of———, do hereby certify under oath, that I have examined into the state of health, and mental condition of ———, of ———, a citizen of the State of Texas, and that he or she is, in my opinion, insane and a fit subject for the State Lunatic Asylum.

Date———

(Signed) ——— ———, M. D.

CERTIFICATE OF COUNTY JUDGE.

I hereby certify that Doctor———, a respectable practicing physician of the aforesaid county, swore to and subscribed before me this day, the above certificate.

Date———.

(Signed) ——— ———, Chief Justice.

The advance payment in all cases must accompany the patient, if a county patient, three months in advance, at the rate of $2 per week in specie; and a private patient, six months pay in advance, at no less rate than $5 per week in specie. All of the foregoing requirements must be strictly complied with, to insure the admission of any patient.

WHEREAS, ———, town of ———, county of ———, an insane person, has been admitted as a patient into the Texas State Lunatic Asylum:

Now, therefore, I, the undersigned, in consideration thereof, bind myself and my successors in office, on the part of the aforesaid county, to M. H. Royston, Treasurer of the State of Texas, and also of this institution, to pay to him and his successors in office, the sum of two dollars per week for the care and board of said insane person, so long as ——— shall continue in said Asylum, with such extra charges as may be occasioned, and also to provide ——— with suitable clothing and pay for all such necessary articles of clothing as shall be furnished ——— by the Steward of the Asylum, and also to pay for all damages done to furniture and to other property of said Asylum, and for all reasonable charges in case of elopement, and funeral charges in case of death; such payments for board and clothing to be made quarterly in advance; and also, to remove ———, or pay for ——— removal from the Asylum, whenever the room occupied by ——— shall be required for a class of patients having preference by law, or when, for any other cause, it may be deemed expedient by the Superintendent or Board of Managers of said Asylum.

In witness whereof, I hereunto subscribe my name this —— day of ——, A. D., 186—. ——— ———.

Witness:——— ———

NOTE.—For private patients adopt the bond, making proper corrections in relation to charges for board, time of advance payments, &c.

ADMISSION OF PATIENTS BY CONTRACT WITH THE SUPERINTENDENT.

Patients of all classes must be made perfectly clean and free from any contagious or infectious disease. They must be provided with suitable clothing, and sufficient in quantity for several changes. A written history of patients should be sent with them, or some person accompany them who can give a correct history of their insanity. The certificate of insanity of one respectable physician, under oath, within two months of date, must in all cases accompany patients; also certificate of County Judge, stating that said physician is a respectable practitioner of medicine. A bond with satisfactory sureties for the payment of their expenses, each six months in advance, must also be given before admission.

FORM OF REQUEST.

To the Superintendent of the Texas State Lunatic Asylum:

The undersigned, of the county of ——, and State of Texas, is desirous of placing in the Texas State Lunatic Asylum, and hereby requests the admission therein of ——, a resident of ——, who is aged —— years, and has been by occupation ——, and a native of —— State.

Signed, ——.

Date, ——.

New Remedies---Their Use, Doses, &c.

We extract the following items from a druggist's circular as the best and latest pharmaceutical preparations. We recommend them:

CITRATE OF BISMUTH AND AMMONIA.

This recently introduced preparation has met with some favor. While the insolubility of the officinal preparations of Bismuth doubtless favor their efficacy in certain cases of irritation of the Alimentary canal, yet in this form of solution it operates on the system in smaller doses, and with greater certainty and effect. Its use is indicated in Gastric Intestinal affections, Diarrhœa and Nausea, it can be diluted in all proportions with water; is compatible with carbonated alkalies, mineral acids, or with tonic infusions and tinctures. Sulphate Quinia is dissolved in it by the acid of Elixir of Vitriol.

The dose is 1 fluid drachm, containing 2 grains of the dry salt.

SUB CARBONATE OF BISMUTH, U. S.

This new officinal is considered to have many advantages over the sub nitrate, among which are its more ready tolerance to the stomach, its greater solubility in the gastric juice, its power to neutralize excess of acid in the stomach and the want of any tendency to constipate.

CHROMIC ACID, U. S.

This new officinal is used only as an escharotic for morbid growths, venereal warts, etc. It acts by rapidly oxidizing and thus decomposing the tissues, while by the loss of its oxygen it is converted into the inert Sesqui oxide. It is used in place of nitrate silver in ulcerations and erosions about the uterus, vagina and other mucus surfaces; also by dentists to destroy the sensitiveness of the dentine.

HYDRIODIC ACID, IN SOLUTION, U. S. P.

This new officinal was first introduced by Buchanan, as a substitute for Iodine or the more irritating Iodides, as it proves to possess the powerful alterative effects of Iodine, while it is less unpleasant to the taste, and less apt to offend the stomach. Each fluid drachm contains ten grains of Iodine.

SULPHUROUS ACID, U. S.

This new officinal was first introduced by Dr. James, as a prompt parasiticide, as an external applicant in Psora, different forms of porrigo, tricosis of the scalp, pityriasis versicolor and the thrush of children; all parasitic affections, either animalcular or cryptogamous, yield to it. It is applied as a lotion diluted with water or glycerine, or by means of a cloth wet with it.

IRON BY HYDROGEN (QUEVENNE'S) IN LOZENGES.

I prepare for those who prefer this form of Iron, a tonic chocolate drop, containing in each, one grain of pure Iron in powder, the advantage of this is that the Iron is prevented from oxidization, and the form affords an agreeable vehicle for exhibiting the remedy.

SYRUP, (OR LIQUOR) OF IODIDE OF IRON.

Prepared strictly after the officinal formula, most of the commercial article has less than half the officinal strength.

SOLUTION OF NITRATE OF IRON, U. S.

This represents the article originally introduced by Dr. Wm. Kerr, but improved and rendered permanent by the modified process of Wm. Proctor.

IODIDE OF IRON, IN PILLS.

After Blancard's process, with a slight modification of my own. Each containing one grain.

MONSELL'S SALT AND SOLUTION.

These preparations, now officinal under the title of *Sub-Sulphate of Iron*, have been known some time as *per sulphates*. This styptic is peculiarly adapted through its power, to coagulated blood, to cases of hemorrhage, fresh incised wounds on surfaces in which it is specially desirable to avoid iritation. It is also used internally.

THE
Galveston Medical Journal.

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Hernia, Rupture.

Hernia is "a tumor formed by the protrusion of any of the viscerae of the abdomen beyond its parieties." The word is derived from the Greek (*ermos*,) which signifies "a branch or something given off." It has also been used to signify the "displacement of any part from its normal cavity as Hernia Cerebri, a protrusion of the brain through the fontanelles or through an opening made by a fracture or trephine." This should be abolished and the word should he strictly confined to the protrusion of the contents of the abdomen through some part of its walls. This, I believe, is now the general use of the term. The hernia humoralis of the old surgeons is now known by orchitis or swelled testicle, and no writer or lecturer of any eminence uses the term in that sense now; and varicose hernia, circocele, varicocele, are enlarged conditions of the veins of the spermatic cord; varix meaning an enlarged and and tortious condition of a vein or veins, thus departing from the true definition of the word hernia.

CAUSES OF HERNIA.

Hernia may be congenital—hernia congenitalis—hernia existing at birth. That is, any protrusion of the abdominal viscera at birth, let it be from any cause whatever or occurring in any part. Whatever is the true cause of hernia at birth it is usually attributed to deficiencies of development in that part. The abdominal walls, not being perfectly formed before their contents, admits of protrusion. The imperfect formation of the walls is a great predisposing cause of all herniæ, and the natural opening or the passages of the spermatic cord. The iliac veins, arteries and nerves—the passage of vena descendens—the passage into the abdomen of the oesophegos and aorta and the umbilical cord. These are not sufficiently tight and leave openings or relaxed spaces for the intestines and omentum to be pressed by them through the abdominal walls, by *crying in children*, *laughing* in young and old, *jars from falls*, *riding on horseback*, *jumping*, *labor pains*, *lifting heavy weights*, &c.; holding the breath, punches in the side by sticks, hands, &c., &c. Any thing that will separate the muscles and passages so as to allow the intestines or omentum to press the peritoneum before them into these ruptures.

VARIETIES OF HERNIÆ.

Herniæ are divided and designated by their locality and further defined by what is pressed through the rupture, as the omentum or the intestine

Inguinal hernia } obil. sive
Incomple hernia } direct,

which is a protrusion of the groin; and it may be *incomple* or *oblique* when it does not protrude through the external ring, and *complete* or *direct* when it does protrude through the external ring.

Even this definition does not suit, we will use the term *complete* to mean all cases where there is no muscle or muscles or tendons between the skin and peritoneum; and *incomple* where there is some covering besides the peritoneum and the skin and the simple intervening cellular tissue.'

Then all herniæ are either *comple* or *incomple*, *congenital* or *acquired*; that is produced from mal-formation, or *traumatic* that caused from any violence producing rupture, as stated in the causes of hernia.

About every eighth person is affected with hernia, and about two males to one female, including all ages and all kinds of hernia; but these estimates are much larger at special ages, for instance, from one to five, about fourteen males to one female; while from twenty-five to thirty about four males to one female. The majority of all cases of both sexes is before thirty-five years of age, but relative to population it is greater after thirty-five years. The laboring classes are much more prone to hernia than others from the causes above given.

Hereditary conformation is a great cause of hernia. That is, the children of ruptured parents are more prone to the disease than those of sound persons. But the immediate cause of hernia is (I believe), in all cases, a forcible contraction of the abdominal cavity, whether congenital or acquired.

SEMIOLOGY OF HERNIA.

The signs of hernia are more or less plain according to the size of the tumor or protrusion, generally there is a soreness or weakness at the place. Then there is a lump, sometimss hard and firm, and soft as filled with water or air, and, before strangulation, this tumor is movable and can be returned to the abdomen, leaving a soft place or hole. Sometimes it will disappear upon laying down and again return on getting up, coughing, crying or laughing.

Often the patient is not aware of the time it comes on, and it may have lasted sometime before he is aware of it; but in youth and old age often the patient is aware of the time and the cause, as a fall, a blow, &c., &c., which may produce it at once, but in most cases there is no acute pain and the protrusion is by degrees not perceptible at once, but strangulated hernia may be mistaken for various tumors, such as buboes in the groin, fatty tumors, &., &c. Where there is no motion in the tumor, and when it exists where the usual sites of hernia are.

THE SPECIAL KINDS OF HERMIA

are, I, in the epigastric region.

Diaphragmatic.—Where the intestines protrude through the opening of the diaphragm and where there is a rupture of its muscular contents and epigastric; where the contents of the abdomen are pressed up between the relaxed diaphragm and the abdominal walls. These two varities are very rare and hard to diagnose, but nearly always fatal, preceded by hicchough and *illeitis* or sturchoratious vomitings.

Sometimes there is an opening at the point of the xiphoid cartilage and the stomach and colon are protruded to a large extent. This is also called epigastric hernia, but we shall class it as ventral.

II. IN THE MESOGASTRIC REGION.

I. Ventral.—Including all the protrusions through the muscles of the abdomen, where there are no natural openings.

II. Umbilical—Where the tumor is at the umbilicus. There is also another, called Lumbar Hernia, where the protrusion is in the lumbar region, but we prefer to call this also ventral, under our definition.

III. IN THE HYPOGASTRIC REGION.

I. A., 1. A. *Inguino-Scrotal*; or *Labial*—Where the protrusion is above the ileo-pectinial ligament—(Poupart's.)

B./2. *Femoral*—Below the ileo-pectinial ligament.

C. 3. *Obturater*—Through the apertures of the pelvis, in front, beneath the ramus of the pubes.

4. *Perineal*—In front, beneath the arch of the pubes.

5. Pudendal—Through the courts of the vagina; (in the pubes.)

6. Vaginal—Through and into the vagina.

7. Ischiatic—Behind, through the ischiatic notch.

All these different varieties are diagnosed on the same general principles, as given before; and are very easy where they are reducible, but where they become strangulated and inflamed, it is more difficult. They, as before stated, may be confounded by the formation of abcesses, which may be diagnosed by a free action of the bowels, where the intestines are involved, and where the omentum is involved; by hiccough and general peritoneal inflammation. Inguinal hernia, as before stated, is the most common; about two-thirds of the total number are inguinal. In females inguinal and femoral occur in about equal proportions. Femoral hernia, in the males, is the least common of these kinds.

Scrotal hernia may come down oblique through the inguinal canal, and pass down to the scrotum, lying above the spermatic cord, or may press through the external ring direct, pushing the cord before it or to one side, and pass down into the scrotum, with the testicle before the sack. It may come down with the testicle, which is often the case in congenitol-scrotal hernia; the vaginal process of the peritoneum being open and common to the cord and testis, and may become strangulated in any portion of its course down to the lower part of the scrotum.

We give below a tabular arrangement of the characteristics of three varieties of oblique inguinal hernia in males, &c., from the Encyclopedia of Surgery, by Holmes. Page 304, vol. iv.

STRANGULATED HERNIA.

A hernia is said to be strangulated when it cannot be reduced; let it be of any kind or variety, or in any part of the body. Strangulation is produced by pressure of the sides of the rupture on the parts protruded, and peritoneal inflammation is set up, and effusion of lymph takes place, and, consequently, swelling, and thereby a strangulation of the veins and arteries takes place, and lastly mortification sets up, followed by sloughing off of the contents of the tumor. As soon as inflammation sets up, there becomes solid adhesions preventing the return of the contents of the sack to the abdomen, but some time relapses before the contents die, and then is the time for medical and surgical treatment.

A tabular arrangement of the characteristics of the three varieties of oblique inguinal hernia in males.

A. Into the VAGINAL PROCESS of the PERITONEUM. (Hernia congenita Helleri.)	B. Into the FUNICULAR PORTION of the vaginal process of the peritoneum.	C. INGUINO-SCROTAL; into the tissues of the scrotum.
1. Is developed most commonly in infancy; occasionally in youth; rarely in adult life.	1. Is developed frequently in infancy; often in youth and in adult life.	1. Occurs in adults, I believe, exclusively.
2. Is suddenly produced.	2. The same.	2. Is slowly produced.
3. At once descends along the inguinal canal into the scrotum.	3. The same.	3. By slow degrees traverses the inguinal canal and scrotum.
4. May rest in the inguinal canal when the testis is not in the scrotum.	4. May rest in the inguinal canal when the testis is in the scrotum.	4. May remain in the inguinal canal for an indefinite period, the testis being in the scrotum.
5. Envelops the testis, and lies in contact with that organ.	5. The testis, at the fundus of the scrotum, occupies its own serous sac, which separates it from the hernia. It usually produces a very distinct prominence at this part.	5. Is separate from the testis, which is at the fundus of the scrotum.
6. The orifice of the hernial sac is contracted, and corresponds with the site of the internal abdominal ring.	6. The same.	6. Orifice of the sac, large and near the external abdominal ring.
7. Neck of the sac long and tubular; it lies in the inguinal canal, between the rings, which are not approximated, even in the adult.	7. The same.	7. Neck of sac short, dilated; inguinal canal shortened; the rings being approximated.
8. Hernial sac a direct, congenital prolongation of the peritoneum; tubular when not distended with a hernia. It reaches the testis in the scrotum, and envelops it. Thus there is a congenital serous canal to receive the hernia.	8. Hernial sac, a direct congenital prolongation of the peritoneum; tubular when not distended with a hernia. It does not extend into the scrotum so low as the testis. A congenital serous canal exists to receive the hernia.	8. Hernial sac a new formation, and slowly developed by the pressure of the abdominal viscera against the parietal abdominal peritoneum, which by extension before the hernia, is thus formed into a sac for it. Here the hernia forms its own sac by pushing the peritoneum before it. The tubular character of the sac is wanting.

Diagnostication.—Every inguinal hernia escapes from the abdominal cavity above Poupart's ligament. If, therefore, the tumour formed by an inguinal protrusion be examined whilst in the inguinal canal, Poupart's ligament is traceable along its inferior border, and the opening where the tumour seems to make its escape from the abdomen is above the same fibrous band. It may be always distinguished, then, from crural hernia; for that kind generally escapes through the crural ring, which is situated behind and below Poupart's ligament, and that ligament may be always traced along the superior border of the tumour.

Again, an inguinal hernia reaches the scrotum through the external inguinal ring, the outer pillar of which is formed by the pubic attachment of Poupart's ligament to the spinous process of the pubes. Now place the tip of the finger upon the last-mentioned process of bone, and if the neck of the tumour lies to its inner side, or between the finger and the symphysis pubes, the tumor must be formed by a protrusion which has passed through the external inguinal ring; a fact sufficiently demonstrative of an inguinal hernia. Should the tumour be to the outer side of the finger, the probability is that the hernia has passed through the crural ring.

Differential Diagnostication.—The surgeon is often required to distinguish between inguino-scrotal hernia and some other tumours developed in the inguinal region and scrotum.

These are—1st, the different kinds of hydrocele; 2d, the encysted spermatocele connected with the epididymis; 3d, varicocele of the spermatic veins; 4th, inflammation of an old hernial sac, and the results of such inflammation; 5th, inflammatory affections and other diseases of the testis, the cord, and their coverings; 5th, hæmatocele; 7th, malpositions of the testis; 8th, inflammatory and other diseases of the inguinal lymphatic glands; 9th growths of fat in the connective tissue of the inguinal canal and upon the spermatic cord; 10th, diseases of the integuments of the scrotum, especially growths, as elephantiasis.

The nature of these diseases being described in other parts of this work, the observations we have to make in relation to the differential diagnosis between them and inguino-scrotal ruptures may be condensed into a tabular form. This plan was suggested by the perusal of a chapter written by M. Vidal (de Casis), entitled "Chronic tumours of the scrotum considered in a diagnostic point of view."*

To one variety of hydrocele it is perhaps necessary to make a special allusion. In rare instances serum collects in the vaginal process of the peritoneum, when its ventral orifice is patent, and the accumulated fluid may be pressed out of the scrotum into the peritoneal cavity through that aperture. This condition usually occurs in infants, but we have seen it in adults, complicated even with a hernia. The differential diagnosis is stated in the table.

The chronic tumors of the scrotum may be arranged in two divisions:

I. The reducible.
II. The irreducible.

In the first division there are:

1. Inguinal hernia.
2. Hydrocele of the vaginal process of the peritoneum.
3. Hydrocele of the funicular portion of the same process.
4. Varicocele of the spermatic veins.

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*Traite de Path. externe, edit. 1841, vol. v. p. 715.

I. THE REDUCIBLE TUMOURS.

	Their entrance or return into the abdomen.		Their passage from the abdomen.
	Characters in common.	Special characters: when without complications.	Special characters.
1. INGUINAL HERNIA.	All returns into the abdomen most easily when the patient lies down on the back and when the abdominal muscles are relaxed.	1. Hernia enters most readily. When once commenced, passes in quickly and suddenly. Entrance complete. Opaque and thick neck of tumour. Testis may or may not be perceptible until reduced. No vibration.	1. Is developed from above, descends when the patient rises or exerts the abdominal muscles, and more quickly than others. The finger pressed over the ring prevents its descent.
2. HYDROCELE OF VAGINAL PROCESS OF PERITONEUM.	—	2. Hydrocele of vaginal process of peritoneum enters slowly, and never suddenly. Entrance complete. Translucent and small neck of tumour Testis imperceptible until the fluid has entered the abdomen. Vibration.	2. Seems to be developed from below upwords. The serum sometimes remains in spite of the horizontal position.
3. HYDROCELE OF FUNICULAR DIVISION OF VAGINAL PROCESS OF PERITONEUM.	—	3. Hydrocele of funicular division of vaginal process of peritoneum enters like No. 2. Entrance complete. Translucent. Neck of tumour may pass into inguinal canal. Testis perceptible at fundus of tumour. Vibration.	3. Similar to No. 2.
4. VARICOCELE.	—	4. Varicocele. Enters very slowly. Entrance not complete, the bulk of tumour only diminished. No vibration.	4. The tumour increases like hernia when the patient rises; but it increases also if pressure be made over the course of the spermatic veins in the inguinal canal, or if the blood be retarded in its passage along them in any way.

II. The irreducible tumours. The tumours in the second division are composed very often of fluid only, sometimes almost exclusively of solids, but occasionally of both solids and fluids in variable proportions.

Those composed of fluid are :—1. hydrocele of the tunica vaginalis propria testis; 2. hæmatocele in the same sac when first developed; 3. encysted spermatocele connected with the epididymis; 4. hydrocele of the spermatic cord.

Those formed by solids, or of solids and fluids, are—1. the diseases of the testis, *a*, of inflammatory origin, *b* specific new growths; 2. hæmatocele of some standing in which changes have taken place; 3. diseases of the spermatic cord; 4. growths of fat extending from the inguinal canal into the scrotum; 5. diseases of the tissues of the scrotum.

CHARACTERISTICS OF THE IRREDUCIBLE TUMOURS COMPARED WITH HERNIA.

Disease.	Weight.	Translucency.	Fluctuation and vibration.	Relation of testis to tumour.	Figure and development.	Size.	Consistence.	Pain.
HERNIA.	Lighter than either the fluid or solid tumours	Very rarely so; generally opaque.	Only when fluid co-exists with the hernia.	Position variable, but the testis usually discoverable.	Pyriform, but with thick neck. Occasionally globular or ovoid. Outline regular. Begins at neck of scrotum and descends.	Variable; at times very large.	Soft and yielding, except it be omental.	Painless unless diseased.
FLUID TUMOURS.	Hæmatocele rather heavier than hydrocele.	Hydrocele particularly so. In rare cases opaque. Hæmatocele opaque.	Distinct; vibration very characteristic, as in the hydrocele.	Perceptible in spermatocele; not in hydrocele of tunica vaginalis propria testis, usually.	Pyriform, but with a very thin neck. Outline very regular. Globular as hydrocele of spermatic cord. Oblong as in spermatocele, and nearly transverse to verticle axis of scrotum. Begin near fundus of scrotum and ascend.	Rarely very large.	Yielding and elastic. Exceedingly incompressible as hydrocele of cord.	Painless unless testis be squeezed, usually.
SOLID TUMOURS.	Generally heavier than fluid.	Opaque.	Absent.	Often involved and imperceptible though its site may be discoverable by pressure.	Outline of testis often preserved. Sometimes surface irregular.	Large; steadily increasing.	Resisting, firm and rarely hard.	Painful, but variable in degree.
MIXED TUMOURS.	Heavy.	Sometimes in parts of them.	In some parts, not in others.	Involved.	Irregular outline.	Large; at times rapidly increasing.	Resisting in parts, soft in others.	Variable.

PERMANENT CURE OF REDUCIBLE HERNIA.

BY GEORGE HAYWARD, M.D., OF BOSTON, MASS.

The undersigned, a Committee of the American Medical Association on the Permanent Cure of Reducible Hernia, beg leave respectfully to report:—

That they addressed a number of questions to their professional brethren throughout the country, in the hope that they might in this way gain such information on the subject of their commission as they would not be likely to obtain in any other. They regret, however, to be compelled to state that they have received but seven answers, and that, though some of these are interesting and valuable, they still do not throw so much light upon the point to be investigated as they had hoped to derive from this source.

The first of them, from Royal A. Merriam, M.D., of Topsfield, Mass., is occupied by the details of an operation for femoral hernia in which a portion of the omentum was removed. The patient recovered, and lived twenty years without any further protrusion. It is not stated whether a truss was afterwards worn or not.

It seems to have been a common case of operation for strangulated femoral hernia, in which the omentum alone protruded. This operation, it is well known, sometimes effects, though very rarely, a permanent cure. It is also well known that the hernia much more frequently returns after it, unless other means are adopted to prevent it.

The second answer is from Geo. W. Hinman, M.D., Derby. It gives the history of a case of reducible inguinal hernia, in which the sac was laid open, and the inside of it "brushed over with the tincture of iodine," the contents of the sac having been, of course, previously returned into the abdomen. The patient did well, and there had been no return of the hernia at the time the letter was written—a year only after the operation—a period not sufficienly long to enable any one to say that the cure would be permanent. It is not stated, either, whether the patient continued to wear a truss.

The writer of the third answer, Geo. O. Pond, M.D., of Griggsville, is confident that he has effected a cure, by means of pressure, in a number of cases of inguinal hernia. Stagner's truss is the instrument by which the pressure has been applied; and of twenty cases he thinks that seven-eighths have been permanently cured. That pressure is one of the most important modes of treating hernia, with a view to a radical cure, there is no doubt; and upon this point the Committee will take occasion to speak hereafter. Though there is nothing new in this communication, it is nevertheless valuable, as it affords additional evidence of the power of one of the means employed to remove this infirmity.

The writer of the fourth letter, Geo. Heaton, M.D., of Boston, has devoted himself pretty extensively to the treatment of reducible hernia, and had given notice to that effect from time to time, for some years, in medical and other publications. It came to the knowledge of your Committee that two or three individuals regarded themselves as cured by his treatment, and, as he was a member of the profession of regular standing, it was supposed that he would cheerfully state his peculiar method, if any such he had, of managing such cases. The Committee, therefore, sent him not only a copy of the questions which they had addressed to the profession at large, but they also wrote him a private note, couched in the most respectful terms.

To this he made a courteous reply, but at the same time declined giving the information sought for. Not content with this, he caused the note addressed to him, and his answer, to be printed in several newspapers; which has, in our opinion, given him a notoriety, wherever the transaction is known, of a very unenviable character. It is certainly an unusual course for a member of our profession to conceal from his brethren any method of treatment which he may regard as more valuable than those in common use, and it is clearly one which cannot be too strongly reprobated by all honorable and high-minded men.

The fifth communication, from John Watson, M. D., of New York, was an account of an operation for the radical cure of an inguinal hernia by injection. The writer adopted the subcutaneous method, as recommended by Dr. Pancoast.

The result was favorable, but a sufficient length of time had not elapsed to enable any one to say that the beneficial effects will be permanent. The operation was done about ten weeks before the letter was written.

A part only of the sixth answer, from Prof. Alden March, of Albany, was strictly in reply to the questions proposed by the Committee. Much the larger portion was occupied by a history of eleven cases of strangulated hernia, for the relief of which an operation was performed, and in eight of these the writer believes that a radical cure of the hernia was the consequence.

The remaining portion contains an account of four cases of reducible hernia, in each of which the writer performed the subcutaneous operation by injection, but in none of them was a radical cure produced.

The seventh and last communication, from Prof. Paul F. Eve, of Augusta, Ga., gives an interesting history of two operations, on a boy of ten years of age, for reducible inguinal hernia, supposed to be congenital. The first operation was that of Bonnet, by means of pins, which was unsuccessful, and, at the end of a month, "a portion of the scrotum was invaginated." After adhesion took place, one of Chase's trusses was applied. The patient continued well for eight months after the last operation, and the operator thinks that he has reason to believe that the cure will be permanent.

This, from the age of the patient, would be very likely to be the result of any method which should prevent, for a year or more, the descent of the hernia.

While the Committee would express their grateful acknowledgments to the individuals who have made the communications that have just been referred to, they at the same time do not feel that all the information has in this way been obtained that the Association have a right to expect. They have, therefore, looked to other sources in addition, to aid them in the preparation of their report, and they will now state, as briefly as they can, what has been done in relation to the radical cure of reducible hernia, and the opinions they have formed on the subject.

It is hardly necessary to go into a detailed history of the various methods that have been employed for the last eighteen hundred years for the permanent cure of reducible hernia. A very interesting and condensed account of them may be found in a dissertation, by Henry Bryant, M.D., of Boston, on "The Radical Cure of Inguinal Hernia," published during the present year, and for which the Boylston Prize was awarded to the author in 1847.

All the operations that have been practised for this purpose, till within the last fifty years, have been of a severe character; some of them dangerous, and in many instances death has been the consequence. *Cauterization*, *ligature*, *sutures*, *excision* of a *part* or the *whole* of the *sac*, and *castration* were the principal operative methods in use for eighteen hundred years. The object of them all was to obliterate or contract the neck of the sac, and thus prevent the protrusion of any of the abdominal contents.

Cauterization.—The caustic was applied to the skin just over the external ring in inguinal hernia, and immediately below Poupart's ligament in femoral. Sometimes the actual and at others the potential cautery was used. It was not unusual to make several applications of the caustic, so as to destroy the skin, sac, and periosteum in inguinal hernia, and thus produce an exfoliation of the bone. When the eschar separated, the part was dressed in the same way as a common ulcer. This was the method adopted by the ancients in the performance of this barbarous operation. Monro, and some other practitioners of modern times, modified it by making an incision in the first instance, and exposing the neck of the sac and then applying the castic. They thought that they thus increased the chance of success, and at the same time lessened the danger.

But even when modified in this way, the most disastrous results often followed it. The spermatic cord was not unfrequently destroyed; the intestine was sometimes perforated; and in many cases death ensued, either from violent and extensive sloughing of the scrotum, attended with severe constitutional irritation, or from peritoneal inflammation. And, in addition to all this, in several instances in which the patient survived this severe treatment, the hernia reappeared.

It is hardly necessary to add that no one at the present day could probably be found to justify, much less perform, such an operation. It is not, perhaps, surprising that the ancients, in their anxiety to relieve an infirmity which was so common, and over which, from their ignorance of anatomy, they had so little control, should resort to almost any method that held out a tolerable prospect of success; but it is wonderful that, after the repeated failures that followed it, as well as its often fatal results, it should have continued in use till modern times.

Ligature.—Ligatures were applied in different ways. One of the earliest methods was to pass a string around the integuments over the neck of the sac, its contents having been previously returned into the abdomen, and tying it so tightly as to cause all the parts below to slough. In inguinal hernia in the male, this, of course, destroyed the testicle.

Another mode was to pass a needle with a ligature through the skin and around the neck of the sac, and then tie the end of the ligature over a piece of wood placed on the integuments. The pressure could in this way be increased till sloughing was produced; and it was pretended by some who practised this operation that, if proper care was used, the sac only might be included in the ligature, and thus the testicle be saved. This, however, did not prove to be true; it was found that, notwithstanding the utmost precaution, the spermatic cord was so much compressed that the functions of the testicle were lost, even if the organ itself was not destroyed.

In order to obviate this difficulty, the operation by the "punctum aurum," as it was called, a ligature of golden wire was suggested and practised. An incision was made in the integuments, the sac laid bare, and a needle, armed with a wire of gold, was carried under the neck of the sac near the external ring. The ligature was tightened from time to time, and it was thought that the neck of the sac might in this way be sufficiently closed to prevent the return of the hernia, without destroying the spermatic cord. But such was not the fact.

The same operation was performed with a common ligature, and sometimes with one of lead. But in all these methods, so much pressure was made on the spermatic vessels as to produce an atrophy, if not an entire destruction of the testicle; and this circumstance, probably, more than anything else, led to the operation by

Suture.—This method, because it did not destroy the virility of the patient, and would not consequently deprive him of the power of increasing the king's subjects, was called "the royal stitch."

There were two modes in which this operation was performed. The first step in both was to return the contents of the hernial sac. This being done, in one method a needle armed with a ligature was passed through the neck of the sac, which was sewed up by the continued suture, as is done in wounds of the intestines. No incision was made, but the needle was carried through the integuments.

In the other method, the hernial sac was first laid bare, the continued suture was used in the same way, and then a part or the whole of the sac below the suture was removed. In both cases the thread was allowed to remain till it was thrown off by the process of ulceration.

This operation could only be used in inguinal hernia. It was by no means uniformly successful; it was difficult to perform, when the sac was to be dissected away; always severe and dangerous, and oftentimes followed by death. For these reasons it is not practised at all at the present day, but is reprobated by all modern surgeons who have had occasion to speak of it.

Excision.—Excision of a part or the whole of the hernial sac was another of the operations that was in practice till comparatively modern times, for the radical cure of reducible inguinal hernia. When the first method was adopted, the contents of the sac being previously returned, a portion of the covering of the hernial tumour, including the integuments and hernial sac, was cut away just below the external ring. The parts were then brought together and allowed to heal; and it was thought that such a contraction would be produced in the mouth of the sac as would prevent any farther protrusion. This, however, was rarely the case. The operation, too, was necessarily a severe one; fatal peritonitis frequently followed it, and in many cases death ensued from a wound of the viscera, which adhered, as they often do, to the neck of the sac.

The removal of the whole or the greater part of the sac was a still more severe and dangerous method, and at the same time equally uncertain. Probably because fatal hemorrhage was by no means an unfrequent consequence of this operation, a modification of it was practised, but with very little, if any more success. This consisted in making an incision from the neck to the bottom of the sac, and then removing a portion of it on each side, the whole length of the incision.

Another operation, that was practised to a great extent and for a long period, though not so dangerous, but far more unwarrantable than that of excision, was *castration.*

This was done occasionally with the knowledge of the patient, but more frequently without. Till within a very recent period, most persons afflicted with hernia, especially inguinal, have been anxious to conceal the fact, from the erroneous opinion that it impared, if it did not destroy their virility. They were willing, therefore, to submit to almost any severe method of treatment that would relieve them of their infirmity. But it is hardly to be supposed that they would consent to the removal of one of the genital organs, because they apprehended a loss of its functions, any more than that they would commit suicide to escape death.

It is well known that various operations were performed for the radical cure of reducible hernia by ignorant persons, oftentimes unprincipled charlatans, who were not very scrupulous as to the means they adopted. Finding that their other methods failed very frequently, and in many instances caused death, they thought that castration would be more likely to produce a cure, and at the same time be far less dangerous. They pretended only to make a free incision in the sac, and declared that, when the wound was healed, the neck of the sac would be so much contracted that a permanent cure would be the consequence. That most of these operators had no confidence in this statement, is apparent from the fact that, after making the incision, they proceeded to divide the spermatic cord and remove the testicle; and such was the ignorance of many of them, that in numerous cases the patient died from loss of blood. To such an extent was this barbarous operation carried at one time, that, in some parts of Europe, penal laws of the severest character were enacted to prevent it, and its performance for the cure of hernia was in some countries made a capital offence.

It was done oftentimes by uneducated, itinerant operators, some of whom not unfrequently were females, not only for the cure, but for the prevention also of hernia, and for this purpose thousands of children have been subjected to this mutilation.

The danger of the operation and its frequent want of success may perhaps be in some measure attributed to the unskilfulness of the operators; but it often failed of effecting a cure, and sometimes caused death when practised by the most expert. Notwithstanding all this, and in defiance of the law, there were found individuals who continued to practise it for this purpose till within the last sixty years.

It is certainly remarkable that inguinal hernia should return so frequently as it is said to have done after castration; but we have the authority of Sabatier for saying that it was not more effectual in removing the difficulty than the application of caustic, the golden ligature, and some of the other methods that have been already noticed.

This fact should teach us not to place too much reliance on any of those operations that are intended to produce a partial or complete closure of the neck of the sac; for, when the testicle was extirpated for the cure of hernia, the whole was sometimes removed by passing a ligature around it, just below the external ring, which caused the parts below to slough, and yet the hernia occasionally again protruded.

The severity, danger, and frequent failure of these operations at length caused all of them to be abandoned; and Mr. Lawrence said, with great justice, in his treatise on hernia, more that five-and-thirty years ago: "Since the enlarged state of the tendinous opening is not removed by the processes adopted for a radical cure, since a recurrence of the disorder is not prevented, we may assert without hesitation that these operations do not afford any greater chance of complete relief than the employment of a truss."

The Committee will next inquire whether any of the numerous methods that have from time to time since that period been suggested and put in practice, have been attended with a greater degree of success. They will not go into a minute detail of all of them, but will present such a general view as will, they trust, make apparent the ground on which their opinions rest.

It should be remarked that none of the modern operations for the radical cure of hernia are as severe as the worst of the older ones of which we have already spoken; though some of them, it must be admitted, are very objectionable on this account.

It should also be observed that the mere fact that so many have been suggested and tried, and that none of them have been received with a great degree of favor, or, if so, that they have not retained it for any considerable length of time, is strong presumptive evidence that there is either an inherent difficulty in the nature of the infirmity that is intended to be removed by them, or that the means of accomplishing it have not yet been discovered.

It is well known that most of these operations have been devised for the radical cure of inguinal hernia, as this is the most frequent form, and the one which is, on the whole, productive of the greatest inconvenience. The object has been to close either wholly or in part the neck of the sack, or plug up, without contracting, the tendinous openings through which the hernia escapes. It has been attempted to accomplish both those in various ways.

In some operations that have been performed for omental hernia, whether strangulated or merely irreducible, a portion of the omentum has sometimes been left in the inguinal canal, under the belief that the adhesions which it would form with the surrounding parts would prevent any future protrusion. Several surgeons have reported cases as successfully treated in this way; but it is not stated for how long a time the patients enjoyed this immunity, and it cannot therefore be known whether the cure was permanent.

One of the Committee is able to state a case which came under his own observation, which, in his opinion, has an important bearing on this point. A healthy young man underwent an operation for irreducible omental hernia. All the omentum beyond the external ring was cut off; the ingunal canal was plugged up by the omentum, which was closely adherent to it; and it was remarked at the time that the patient would never probably be troubled with hernia again. Within two years of that period, he was obliged to submit to an operation for strangulated enterocele on the same side. The very circumstance that was supposed to be sufficient to relieve him permanently was probably the cause why the hernia could not be returned by taxis.

It has been attempted to close the external ring by forcing the testicle into it, and then bringing on such a degree of inflammation as would be likely to retain it there by the effusion of fibrine. Sometimes this has been done without making an incision in the integuments, and at others the testicle has previously been laid bare.

This operation is certainly not admissible. It is unsafe; it is not probable that the testicle could be kept either at the external ring or within the inguinal canal; if it could, it would, no doubt, be a source of great inconvenience and irritation, and in addition to all this, it would not in all probability prevent the return of the hernia, but would on the contrary, rather facilitate it.

It has been attempted also to close the external ring and inguinal canal by means of the hernial sac. This operation has been done by Petit and Garengeot. The sac is first exposed; a portion of it is then crowded into the inguinal canal, under the expectation that adhesions would be formed between them sufficiently strong to prevent any subsequent descent of the hernia. This method is, perhaps, less objectionable than the preceding one, on the score of danger to the patient, though by no means entirely free from it, but is not any more likely to effect a cure. There is no reason to believe that it is performed by any one at the present day.

M. Gerdy has practised an operation, which consists in crowding the integuments into the inguinal canal, and removing the cuticle from them by means of caustic alkali. This is what has been called by the French "invagination by the integuments.,' Some modifications of this method have been suggested by M. Leroy and M. Signorini, but from what we have been able to learn, we do not deem it of sufficient importance to give any detailed account of it.

M. Velpeau states that he performed it once unsuccessfully; that it had been done by M. Gerdy upon thirty patients; and that, though many of them seemed for a time to have been cured, a sufficiently long period had not elapsed to enable any one to speak with confidence of the ultimate result. He also adds that he had seen three of the persons who had been thus operated on, and who thought for some time after the operation that they were cured, in all of whom the trouble had returned precisely as it was before.

The truth seems to be that the adhesions which may be formed between the integuments and the interior of the canal are not very firm, and that, though they may for a time prevent the descent of the hernia, yet, as they are gradually absorbed, no resistance is at length offered to it.

M. Velpeau observes that, though it is not actually a dangerous operation, there is some risk of wounding the epigastric artery, and there is some reason, too, to fear severe phlegmonous inflammation of fatal peritonitis.

M. Belma's operation attracted for a time some degree of attention, as it was less severe than that of M. Gerdy, and would, it was at first thought, be in all probability more successful. His first method consisted in introducing a small pouch of goldbeater's-skin into the upper part of the hernial sac. This was followed by an effusion of fibrine, which he supposed would, together with the goldbeater's skin, become organized, and the two sides of the sac being firmly glued together must necessarily prevent any subsequent protrusion of the abdominal contents.

He afterwards modified his operation, because he found that his success did not equal his expectations. This he attributed to a deficiency of inflammation; and with a view of increasing this, he introduced into the neck of the sac, as near the external ring as possible, small rolls of gelatine covered with goldbeater's skin. There is no reason to believe that the result of this proceeding was any more favorable than that of the other. The operation has fallen into disuse. M. Velpeau says that the hernia returned more frequently after it than it did after that of M. Gerdy.

Dr. Jameson of Baltimore, has given a description of an autoplastic operation which he performed on a female for crural hernia. The Committee have not seen the original account of the case, but have derived their knowledge of it from the statements that have been made in the works of others.

The sac was laid open, and the crural ring was filled up by a portion of the integuments, which were cut into a proper form and inverted. This was confined in its situation by sutures. Adhesion is said to have taken place, and the patient was regarded as cured.

Admitting that there was no danger in the operation, it is certainly not probable that any union would take place between the integuments and the ring that would be permanent; on the contrary, it can hardly be doubted that the fibrin effused in the first instance would be gradually absorbed, and that a protrusion of some of the abdominal contents would ere long again take place.

It is believed that this operation has not been repeated; or, if it has, the result, so far as we know, has not been made public. This fact would perhaps justify the inference that the relief obtained by the patient on whom Dr. Jameson operated was not permanent, otherwise it would be difficult to explain why a similar operation should not have been adopted in other instances.

M. Graefe has described a very barbarous mode he took to bring on inflammation in the inguinal canal, with a view to the radical cure of hernia. It has no advantage over the old and justly reprobated operation of the excision of the sac, while it is almost as severe, and far more dangerous. It consists in laying bare the neck of the sac at the external ring, cutting it off at that place, and then introducing a piece of lint, smeared with some stimulating ointment, into the inguinal canal, carrying it up to the internal ring, or even beyond. One end of a piece of string is to be tied around the lint, and the other end is brought out at the wound. When suppuration is well established, the lint becomes loose and can be readily withdrawn. This is said to take place usually in three or four days, and the amount of inflammation that is induced would be sufficient, it was thought, to prevent any future descent of the hernia.

This operation has been performed, it is said, with success in a few cases; a result certainly not to be looked for, and the expectation of which would not justify any man, who had a proper regard for human life and his own reputation, to repeat it.

The introduction of a seton has been recommended as a likely means of closing the neck of the sac. It has been advised to keep it in till suppuration comes on, and then withdraw a part of the threads daily, till all of them are removed. It was supposed that in this way adhesion might be produced between the opposite sides of the sac.

It is not probable, from what we know of its effects in hydrocele, that this would succeed; and it is much more probable that it would bring on such a degree of inflammation in the peritoneum as would terminate in death. From what is known of the laws of inflammation, there is much more reason to suppose that the suppurative process rather than the adhesive would be induced by this long-continued irritation; so that, while the patient would be exposed to great hazard, he would have but a small chance of a cure.

M. Bonnet, an eminent surgeon of Lyons, has attempted to close the neck of the sac by exciting inflammation in another way. From two to four pins, with double the number of small pieces of cork, are all the instruments that are required for his operation. The contents of the hernial sac having been returned, a pin which has been passed through one of the pieces of cork is then pushed through the integments and the neck of the sac, as near as possible to the external ring, care being taken not to wound the spermatic cord. The pin is then brought out on the opposite side, and the point is carried through another piece of cork. Another pin is then introduced in the same way. Two are usually all that are necessary; but occasionally one or more additional ones may be required. The point of the pin which projects from the cork is seized with a small pair of pliers, and bent over so as to bring the opposite sides of the sac into close contact. This is done to all the pins, and this process is repeated from day to day, till it is thought a sufficient degree of inflammation is produced to cause adhesion. When this has taken place, the pins should be removed, and this is usually in from six to twelve days.

M. Mayor, of Lausanne, has modified this operation by using needles instead of pins, carrying in this way ligatures through the neck of the sac, which are afterwards tied over pieces of sponge. These can be tightened as much and as often as may he thought necessary to produce the desired effect. The number of ligatures required for this purpose must depend on the size of the hernial sac.

These operations are not attended with much danger, and are by no means difficult to perform. At the same time they offer but little prospect of a successful result. They are insufficient for the purpose for which they are intended. They do not obstruct in any degree the inguinal canal, and even when most successful, they only partially close the neck of the sac.

For these reasons, probably, if not for others, they have fallen entirely into disuse, not being resorted to even by the inventors of them.

Acupuncture has been tried to a very considerable extent both in Europe and this country. Two or three rows of punctures were made through the integuments and the neck of the sac, just below the external ring, with a common needle of the ordinary size, or an acupuncture needle prepared for the purpose. There is no reason to believe that any permanent good effect has been produced in this way, and it is not probable that any one tries this method at the present time with the expectation of producing by it a radical cure of hernia.

The same may no doubt be said of the *scarification of the inguinal canal*, as practised by M. Velpeau a few times, and the subcutaneous *scarification of the neck of the sac*, as performed by M. Guerin. Besides the utter inefficiency of these operations, there is, especially in the former, some danger of wounding the epigastric artery.

The operation by *injection* has been done in two ways. In one, the neck of the hernial sac is previously laid open, and the fluid then thrown in; and, in the other, it is introduced by the subcutaneous method. The first is the operation as performed by M. Velpeau, and the other that of Dr. Pancoast, of Philadelphia.

M. Velpeau was evidently dissatisfied with all the operations that had been performed for the radical cure of reducible inguinal hernia; but he was unwilling to believe that no remedy could be found for it. The success which so often followed the operation for hydrocele by injection led him to think that a similar course might produce the same results in the treatment of reducible hernia.

He accordingly performed the operation on the first favorable case that presented. An incision of an inch in length was made just below the external ring down to the neck of the sac; this was opened with a bistoury, and a mixture of six drachms of tincture of iodine in three ounces of water was thrown in. An assistant compressed the ingunal canal, so as to prevent the fluid from coming in contact with the peritoneum above the ring. After the injection had been pushed around the various parts of the sac, it was allowed to escape through the canula. No unpleasant symptoms followed; but the final result of the experiment has not, as far as we know, been made public.

M. Velpeau does not seem to have much confidence in the operation, and it is understood that he does not continue to perform it at the present day. He has probably learned that something more than the mere closure by the process of adhesion of the neck of the sac is necessary for the radical cure of hernia. The fibrin that is effused will in most cases be soon absorbed, so that the barrier which had been relied on to prevent the descent of the hernia will be entirely removed.

About the same time, Dr. Pancoast performed the operation, which is described in his work on "Operative Surgery." The hernial sac, its contents having been previously returned, was punctured with a small trocar passed through a canula. Having ascertained that the instrument was fairly in the sac, by the freedom with which it could be moved about, the point of it was then directed upwards so as to scarify the internal surface of the upper part of the sac. The trocar was then withdrawn, and half a drachm of the tincture of iodine, or an equal quantity of the tincture of cantharides, was thrown in slowly by means of a small syringe fitted to the canula. The canula was then withdrawn, and a compress was applied just above the external ring, and the pad of the truss, which had been put on before the operation, was brought down over the compress.

This operation was performed in thirteen cases, in one of which only were there symptoms of serious inflammation, and these readily yielded to leeches and fomentations. In some of these patients a single operation was performed, and in others, in whom the sac was large, several were required. All of them were evidently benefited at the time, but whether a radical cure was effected in any instance could not be ascertained, as nothing was known of the patients after a few months from the time of the operation. Whether Dr. Pancoast continues to practise it, we are unable to say.

This method has, in the opinion of the Committee, all the advantages of that of M. Velpeau, while it avoids in a great degree the danger of peritoneal inflammation, to which patients are exposed by his mode. When the hernial sac is laid open, there is of course a direct communication between the abdominal cavity and the external wound. This alone would be likely to excite inflammation, and if, in addition, a part of the peritoneum is subjected to the action of an irritating fluid, there is reason to fear that the inflammatory process would not be limited to the sac, but that fatal peritonitis would be the consequence.

Admitting that these operations accomplished all that they were designed to do, it does not follow, by any means, that they would in every instances produce a radical cure. All that they could effect, if successful, would be to close the neck of the sac, without contracting the tendinous opening or ring. Sir Astley Cooper very truly says "that, although the original sac may be completely shut at its mouth by adhesion or perfect contraction, it is possible that another sac may be formed contiguous to the first." In fact, it is well known that sometimes the hernia has recurred, after the whole of the original sac has been removed. Contracting or even closing the neck of the sac is evidently then not enough; "something more," says Mr. Lawrence, "is required; we want a remedy that should contract the tendinous opening; for while that remains preternaturally large, a new protrusion is a highly probable occurrence."

This has been attempted in two ways. The first is by scarification of the external ring in inguinal hernia, and the other is by means of sutures. The first of these is quite an old operation. Heister says that "some surgeons scarify the ring of the abdomen, or aperture through which the intestine prolapsed, together with the skin, in order to render the cicatrix more firm; by which means many have been cured of these ruptures, especially if they continue to wear a proper bandage for a considerable time afterwards. But I think that the operation may succeed better in infants than in adults."

It is perhaps enough to say, with regard to this method, that it has been occasionally tried from time to time, for more than a hundred years, without a sufficient degree of success to gain the confidence of surgeons; and it is not to be overlooked that the danger of wounding the epigastric artery is no inconsiderable one; enough at any rate to deter all but the most expert from attempting to perform it.

The operation of closing the external ring by means of sutures is, we believe, quiet a recent one. It is proposed by Thomas Wood, M.D., of Cincinnati, who states that he has performed it in three cases with success. His paper on the subject may be found in the last volume of the

Transactions of this Association. It is certainly entitled to great consideration, not only from the importance of the subject, but from the candid manner in which he has treated it.

He says that his "experience is too limited to warrant him in saying much in its favor, but he cannot refrain from expressing the opinion that it offers to the ruptured patient a better prospect of a 'radical cure' than any operation before proposed."

He thinks that all the preceding operations have failed, because, from the nature of the texture concerned in them, the adhesions have not been sufficiently strong to prevent the descent of the hernia, and he founds his expectations of success from his method on the following considerations: "Tendons," he says, "when wounded, will unite again by a formation similar to their original structure."

"Tendon is a permanent, unyielding tissue, seldom ruptured by the strongest exertions of the body."

"If we can close the external ring by a tendinous growth, we may effect a "radical cure of hernia.'"

We do not deem it necessary to go into the details of the operation; for these we refer to the author's paper. But we would remark that it is by no means certain that tendons, when wounded, are united by a similar substance. Much light has been thrown on this point within the last few years by the numerous cases in which tenotomy has been performed, and the Committee think that they are justified in saying, that it has been ascertained that the divided edges of tendons are united by a substance less resisting, more elastic, and not so firm as the original texture of the tendon.

But although this operation may not be found on further trial to be more successful than that of the scarification of the ring, yet, as it proposes to accomplish what has never been effected in any other way, viz., the contraction of the tendinous opening, it certainly, on this account, if no other, merits the careful consideration of the profession.

An operation similar to that of Dr. Pancoast, if not precisely the same, has been performed to a considerable extent in the neighborhood in which your Committee reside. Many persons, it is said, have been cured by it; but we have not met with any one of them who has felt that the truss could be safely laid aside. In one instance which has come to our knowledge, an individual submitted to the operation and thought himself cured. In a few months after, he gave up his truss, supposing that compression was no longer required, but in eighteen months from that time the hernia returned.

It is not pretended, however, that a cure may never be effected by this method, when all the circumstances of the case are favorable. It may happen, sometimes, when the hernia is small and recent, and when the patient is in good health and young, or has not passed the middle age of life; and it may too be of great advantage in some cases in which the hernia could not be kept up by the truss alone, as this operation would be likely to cause an abundant effusion of fibrin in and about the neck of the sac.

Two of your Committee have had some personal knowledge of it; the result of their observation and experience will be found at the end of this report.

It is an unquestioned fact that reducible hernia is often cured in young subjects. It may be accomplished in them by various means;

but it should not be thence inferred that the same course would uniformly produce like effects in adults.

It may be remarked that, in children, any method which can prevent the protrusion of the hernia for a year or more will, in all probability, produce a permanent cure. If the aperture through which the contents of the sac must pass can in any way be prevented from enlarging, while the viscera of the abdomen are increasing in size, it is obvious that a great length of time would not be required to render an escape of any of the abdominal organs difficult, if not altogether impracticable. We see familiar examples of this daily in umbilical hernia, which is brought on so often in infancy by whooping-cough and various other causes. *Compression*, it is well known, will, in all such cases, if carefully practised, in a comparatively short period produce a radical cure; and it is a valuable agent in the management of reducible hernia at every period of life. It has been used from the time of Celsus to the present, and it has not unfrequently succeeded in producing the desired result. It is usually applied at the present day by means of trusses. Great improvement has of late years been made in their construction. It cannot be doubted that an instrument of this kind, when wisely adjusted, so as to cause no pain or inconvenience, and at the same time to compress the neck of the sac, may, if used for a considerable length of time, prevent in many cases the subsequent protrusion of the hernia.

It is well known that pressure upon a serous membrane, when carried to a certain extent, will cause an effusion of fibrin on its inner surface, and it was from a knowledge of this fact that, in former times, the method of treating aneurism by compression was adopted. This mode often succeeded in producing a radical cure, by closing the artery leading to the aneurismal sac. The practice has been revived with great confidence within the last few years, and the results hitherto have been equal to the expectations of its advocates.

In the treatment of hernia in this way it is of the utmost importance that protrusion should not be allowed to take place at any time; "for if the hernia once descends during the wearing of the truss," as Sir Astley Cooper well remarks, "the cure must be considered as recommencing from that moment." The truss, therefore, should be worn by night as well as by day.

It is important, also, that while the pressure is sufficient to prevent the descent of any of the abdominal contents, it should not be enough to cause any considerable degree of inflammation. This would not only require the truss to be laid aside altogether, but it would also stop entirely the effusion of fibrin. In inguinal hernia, the pad should be so placed as to compress the inguinal canal and at the same time great care should be taken to avoid pressing the spermatic cord against the pubis.

A radical cure will not be effected in this way, unless the compression is continued for a length of time. It cannot be reasonably looked for in an adult in less than two years from the time the truss is first worn; and it can hardly be expected at all in persons after the middle age of life, who are afflicted with a direct inguinal hernia of long standing. At the same time, more benefit is derived from compression in such cases than from anything else, and persons in this situation are not safe without it.

The Committee beg leave to offer the following opinions as the result at which they have arrived after careful examination of the subject committed to them:—

I. That there is no surgical operation at present known which can be relied on with confidence, to produce in all instances, or even in a large proportion of cases, a radical cure of reducible hernia.

II. That they regard the operation of injection by the subcutaneous method as the safest and best. This will probably in some cases produce a permanent cure, and in many others will afford great relief.

III. That compression, when properly employed, is, in the present state of our knowledge, the most likely means of effecting a radical cure in the greatest number of cases.

All of which is respectfully submitted, by

GEO. HAYWARD,
J. MASON WARREN,
S. PARKMAN,
Committee.

We here introduce from "A System of Surgery by various Authors," page 308, vol. 4, the most improved treatment of the different varieties of hernia:

Between the local signs of an inflamed scrotal hernial sac, especially if its orifice be plugged by omentum, and an inflamed hernia, there is a close resemblance. But from the history of the case, and the absence of those constitutional symptoms which accompany an inflamed hernia, a correct diagnostication may be formed.

The inflammatory conditions of the testis, the cord, its coverings, and the tissues of the scrotum, do not resemble hernial tumours either in the local or constitutional manifestations. It is more probable that a hernial protrusion might be considered to be some affection of those organs, than that they should be mistaken for a hernia. The history of the case usually removes all doubt as to its nature.

Treatment.—The palliative treatment of reducible oblique inguinal hernia consists in maintaining perfect and unintermitting retention of the hernia; for if this be done carefully and with method, a permanent cure may be affected, especially in children. The cases of hernia into the vaginal process, if carefully treated immediately after the first appearance of the rupture, and before the walls of that canal have been stretched for any length of time, are sometimes cured by the employment of a well adjusted truss. But in the use of this instrument before puberty, great attention must be given to the site of the testis; for the pad of the truss might press injuriously upon that organ. The spring of the truss must not be too powerful; for if the pressure of the pad upon the walls of the abdomen is very strong, their tissues are absorbed where the pad presses, and they become, in consequence, seriously weakened. The pad should prevent the escape of the hernia by its accurate adjustment, rather than by the force with which it presses against those apertures through which the hernia passes. On this account, each individual requires to have a truss adapted to the configuration of the body. The pad should be applied over the internal inguinal ring, pressing gently upon the inguinal canal to afford support to the tissues of that part, and not upon the external inguinal ring and pubes, as we have often seen it applied. The patient should be enjoined to wear the truss uninterruptedly, except only when lying in bed; to adjust it carefully before leaving bed in the morning, and on no account to permit the hernia to remain for a moment in the sac.

When the hernia has acquired large dimensions, or has become irreducible, a particular form of appliance, termed the bag-truss, becomes indispensable.

The radical cure of reducible inguinal hernia.—The mode of performing the operation as practised by Wutzer is as follows, (a special instrument is required, which consists of two pieces of wood and a flexible needle):

The patient being placed in the most favorable position, and the rupture carefully reduced, the fore-finger of the operator is used to invaginate the integuments and to push the fundus of the sac into its orifice. The cylindrical wooden plug is next inserted in place of the finger, and the needle thrust through the invaginated skin, sac, anterior wall of the inguinal canal, and skin of the groin. The grooved piece of wood is then laid over the inguinal canal, held in position by the needle, and screwed tight to the first piece, in order to induce adhesion between the tissues thus compressed between them. The plug is retained for seven or ten days, according to circumstances; after its removal, a pad should be adjusted to support the part, and prevent the extrusion of the invaginated tissues.

The commonly unsuccessful issue of the operations performed on the principle of invagination, as advocated by Gerdy, Wutzer, and others, induced Mr. Wood to search for the cause of failure. This he attributes to the want of union between the invaginated tissues and those lying behind them. The theory of Wutzer's operation is to induce adhesion between the fundus of the hernial sac and the entire circumference of its orifice, as well as entire obliteration of the other parts of the sac by adhesive inflammation. Unfortunately, however, the results of practice do not uphold the theory.

Mr. Wood* has contrived an operation by which he believes the chances of failure above mentioned are prevented. The operator requires a special needle, scalpel, compress made of wood, glass, or porcelain, and some strong hempen thread. The contraction of the abdominal muscles should be completely controlled by the influence of chloroform.

After an incision has been made through the skin of the scrotum, the fore-finger of the operator is pushed behind the hernial sac as far as possible into the inguinal canal, and in front of the spermatic cord, at the same time invaginating the tissues. The needle is next carried by the side of the finger and passed through the conjoined tendons of the internal oblique and transversalis muscles, the inner pillar of the external inguinal ring, and the integuments. Great care is required to avoid including the spermatic cord. A thread is next passed through the eye

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***On Rupture, Inguinal, Crural, and Umbilical, &c*, by John Wood, 8vo., Lond., 1863.

of the needle, and the latter is withdrawn, leaving one end of the thread in the puncture. The needle, still threaded, is next passed through the aponeurosis of the external abdominal oblique muscle near to Poupart's ligament, and opposite to the internal inguinal ring, and its point brought out through the opening in the integuments first made by it. A loop of thread is left behind, and the needle, with the thread still in it, is again passed through that portion of the conjoined tendons which lies over the rectus muscle, close to the pubic spine and the inner pillar of the ring. Its point is now brought through the first puncture for the third time, and the needle altogether withdrawn from the thread.

Thus a loop and two ends of the thread pass through one opening in the skin. "Two portions of thread are thus placed across the hernial canal, invaginated fascia and sac, closely embracing, but not including, the spermatic cord, and connecting the posterior or deep wall with the anterior or superficial, perforating the aponeurosis of the external abdominal oblique muscle in three places; but escaping by the same aperture in the skin"—(Wood). The compress is next applied over the canal obliquely, and the two ends of the thread passed under the loop and tied in such a manner as to give equable adjustment to the pressure.

The after treatment of the case is the same as that adopted in similar operations.

Mr. Wood describes several modifications of this operation in which wire was used with good results.

The taxis.—When a surgeon has a case of irreducible inguinal hernia to treat, his attention should be particularly devoted to a very careful examination of the tumor, in order to diagnosticate the variety under observation. He should ascertain with accuracy the anatomical relations of the tumor to the surrounding parts; the position of the testis, especially; the length of time the patient has been ruptured; the mode of develhpment of the hernia, whether suddenly or slowly; the treatment pursued to prevent the protrusion from taking place; and the history of the present state of the rupture.

Having determined the variety, if the state of the tumor permit, he may employ gentle pressure in order to reduce the protrusion, remembering the direction or course it has taken, and the circumstances which probably cause the impediment to its reduction. The abdominal muscles must be relaxed as much as possible whilst the patient lies on the back.

It is only necessary to describe, in this place, the manipulative proceedings, as the constitutional measures employed to render them more effective have been detailed at page 262. A very much larger proportion of the cases of inguinal hernia are now reduced by taxis than formerly. This is due to the introduction of chloroform, the effects of which in producing total annihilation of the contractile function of muscular tissue are so important. Small inguino-scrotal protrusions are not reduced with the same facility as large ones. When such a protrusion occurs in a young person, and has been only recently developed, after a fair trial of the taxis, when the patient is fully under the influence of chloroform, and the efforts to reduce it have failed, any delay in removing the impediment to the replacement of the hernia is reprehensible. To resort to any other measure which necessitates the occupation of time, is only to abandon the sufferer to additional risk of the loss of life.

If the protrusion be compound, that is to say, when it consists of a large mass of omentum and a very small knuckle of bowel, the reduction of the latter is effected with difficulty. The same thing occurs when the hernia is one of irreducible omentum of long standing, from old adhesions, and a small piece of bowel. Also, when the sac is distended and rendered very tense by a considerable effusion of serum. The efforts of the surgeon to reduce the bowel, are thereby rendered abortive; for if the serum cannot be made to pass through the mouth of the sac, into the abdomen, the hernia never will.

The operation.—The patient should lie on the back, with the pelvic region slightly elevated, unless some firm, resisting body, as a mattress, cushion, or table, be underneath. The anatomical points which the surgeon particularly wishes to reach or display in the cutting operation are, the external inguinal ring, the aponeurosis of the external abdominal oblique muscle, the internal inguinal ring, and the mouth of the hernial sac. The various structures which constitute the coverings of the hernial sac need not be displayed with rigorous anatomical precision. They differ exceedingly in density and development in different cases. The length of the incision should not be proportioned to the size of the hernia. Its length must be just sufficient to expose freely the anatomical points, alluded to above, and no more. In ordinary cases, the point of the scalpel should be inserted through the integuments at about two inches above the assumed centre of the external inguinal ring, and carried downwards upon the anterior surface of the tumor, to terminate about two or three inches below the same mark. The margins of the external inguinal ring are next carefully exposed, and their relations to the tumor examined. They should not be cut unless it be imperatively required to do so. The deeper coverings of the hernial sac are next carefully incised, with or without the assistance of a grooved director, until that important structure is reached.

The operator, pressing his finger upon the sac, next insinuates it through the external inguinal ring, in order to ascertain if there be any structures which firmly encircle the neck and orifice of the sac. Should he discover any, a grooved director may be guided by the finger underneath them, and they may be cut. After slight pressure made upon the sac, its contents may sometimes be returned into the abdomen at this stage of the operation. If their reduction be not practicable, the peritoneal sac must next be opened. It must be done after the manner described before, and with great care. Probably some serum will escape when the sac is cut, but this is not always the case. The opening in the sac requires to be sufficiently large to allow the operator to reach its orifice easily, and to examine its contents. The index-finger is now passed along the anterior surface of the protrusion upwards towards the mouth of the sac, where an impediment to its further passage is encountered. The tissues which bound this narrow opening constitute the impediment to the reduction of the hernia. The operator next passes the hernia bistoury along a grooved director, or upon his finger, through the mouth of the sac, and divides the structures in contact with the knife sufficiently to allow the ungual phalanx to be passed freely into the abdominal cavity. The direction of this incision should be parallel with the linea alba. A few small arteries are occasionally cut during the operation, which may be tied immediately, before proceeding further.

Oblique inguinal hernia in the female sex.—This variety occurs at very early periods of life. In fact with the exception of umbilical hernia, it is the only kind developed before five years of age. Even until the age of puberty it is more common than any other variety. Its development in infancy is due to the patulous state of the vaginal process of the peritoneum, otherwise known by the name of the canal of Nuck. Doubtless such a condition of this process remains throughout early life, into which a hernia occasionally and suddenly descends. In the adult female this hernia generally forms slowly.

Its anatomical relations are alike in both sexes, merely substituting the round ligament in the female for the spermatic cord of the male, and the labium pudendi for the scrotum.

It is commonly believed that inguinal hernia is much more rarely met with in women than femoral. However, this belief seems to be founded on an error. Mr. Kingdon's valuable tables show that, in the years of 1860 and 1861, 1582 females, at all ages, suffering with either one variety of hernia or the other, came under his observation. Of these, 761 were afflicted with inguinal hernia, and 821 with femoral. Of, inguinal hernia was only 30 less than half the total number, whilst femoral was but thirty more than half.

The tumor formed by an inguino-labial hernia rarely attains the size so often reached by inguino-scrotal. Still, we have seen one which descended more than half-way below the middle of the thigh, and the coverings of which had become so attenuated that the convolutions of the intestines were distinctly visible. When of moderate size, it is generally of a more globular figure, and it has a longer and more contracted, or more narrow and cylindrical, neck, than in the male sex.

In forming a correct diagnostication of this hernia in the female, the same anatomical points must be taken as guides which have been already described when that in the male sex is under consideration. The surgeon should, however, particularly remember that a hydrocele of the round ligament, or of the canal of Nuck, is occasionally developed, which might lead to an error in diagnosis.

The palliative measures described as being suitable in the treatment of cases of inguinal hernia in the male sex are applicable in these also; but if the hernia become strangulated, the surgeon must regard the accidents arising from misapplied taxis and delay in liberating the bowel with very great suspicion, and act with promptitude and decision. In the cases we have seen, under these circumstances, the symptoms have usually been rather severe at an early period of the attack; and in those upon which we have been required to operate, the impediment to the reduction of the bowel was at the orifice of the sac, and certainly insuperable without a cutting operation.

In the female sex, the operator must be guided by the same anatomical points in his attempt to reach the mouth of the hernial sac as in the the male. And he should remember that, occasionally, although very rarely, the bowel may be constricted by a contraction of the sac itself near the external inguinal ring, and not by its ventral orifice only.

Direct inguinal hernia.—The variety of inguinal hernia characterized by the term "direct" occurs in both sexes. It belongs to that class in which the hernial sac is formed slowly, or is an accidental or acquired formation. The only exception to the slow mode of formation is in those rare cases where the structures immediately behind the external inguinal ring are lacerated by violence, and a hernia protrudes. It is never the result of a congenital imperfection. This variety is sometimes styled the internal inguinal, from the fact that the mouth of the sac, where it is continuous with the parietal abdominal peritoneum, is placed to the inside of the internal epigastric artery. It is comparatively rare.

At its commencement it forms a prominence where it points behind the external inguinal ring, through which it soon passes into the upper part of the scrotum. The outline of the tumor which it forms is more globular than that produced by the oblique course of the variety before described. It seems to be produced by something which escapes at once or directly from the cavity of the abdomen. Hence, probably, its specific name. The mouth of the sac is close to the outer border of the pubic attachment of the rectus muscle, the posterior surface of which may be much more easily felt when the hernia is reduced than in oblique. On the outer side of the orifice of the sac the pulsations of the internal epigastric artery may be felt. The finger enters the abdominal cavity much more readily in direct inguinal hernia than in oblique. Upon ocular examination from a short distance it will be seen that a line passing through the vertical or long axis of the tumor lies parallel with the linea alba, and there does not appear to be any inclining or curving of the neck of the tumor outwards and towards the crest of the ilium, as is observed in one formed by oblique inguinal.

In its passage from the abdomen a direct hernia merely traverses that small portion of the inguinal canal which lies immediately behind the external inguinal ring, and those structures which form that part of the floor of that canal are either pushed before the hernia, or they are lacerated when the hernial sac escapes through the opening so formed. Those structures are the conjoined tendons of the internal oblique and transversalis muscles and the pubic portion of the internal abdominal fascia. The spermatic cord and round ligament are not attached to the hernial sac until it has reached the external abdominal ring. When it has passed that point, they lie to its outer side, and are usually less identified with its tissues than in the oblique variety.

The diagnostication between this variety of inguinal hernia and oblique must be performed under the guidance of the facts before described.

The palliative treatment requires a particular kind of truss, which must be so constructed as to give support to the defective abdominal walls posterior to the external inguinal ring.

The method of exposing and opening the hernial sac to liberate a strangulated bowel does not require any special description here. Facts, however, worthy of note are, that after the division of those structures superficial to the external inguinal ring, the spermatic cord may appear to be unusually distinct, and that the deeply seated coverings of the hernial sac are often very attenuated. Considerable care is therefore required in the operation of incising them.

Ingunal hernia sometimes pass through abnormal apertures in the aponeurosis of the external abdominal oblique muscle.—It would be an oversight not to allude to the fact, that an inguinal hernia sometimes passes through an opening or division of the fibres in the aponeurosis of the external abdominal oblique muscle close to the ring, and not through the true external inguinal ring, which is then traversed by the spermatic cord alone. Such anatomical varieties are rare, and would only require some slight modification of the operation, to meet their peculiarities.

Crural hernia, also called femoral or merocele, was not accurately distinguished from some forms of inguinal until the middle of the 17th century. Its designation in a measure indicates the region of the body where it forms a tumor, which, however, may be stated, with greater precision, to be the upper and inner part of the thigh. Its anatomical relations were not accurately defined for many years after it was known to pursue a different course to inguinal; and it is curious to follow the gradual development of our knowledge of those structures immediately interested in, or associated with, this variety of rupture.

The principal anatomical points which should be examined, from the outside of the thigh as well as from within the abdomen, are the following: the ligament of Fallopius or of Poupart; Gimbernat's ligament; the crural canal or ring; the fascia transversalis and iliaca, or the internal abdominal fascia of the iliac fossa; the falciform process of the fascia lata and the saphenous opening; and when a hernial sac exists, the fascia propria of Sir Astley Cooper.*

Relations of the mouth of the hernial sac to the internal epigastric artery and vein.—The orifice of the peritoneal sac holds important relations to the internal epigastric vessels. Some pathologists have established three varieties of the ordinary kind of crural hernia on this basis. The first, in which the orifice of the sac is situated to the outer side of the epigastric, external crural hernia; the second, where it lies to the inside of the same vessels, the middle crural hernia, the most common; the third, in which it is placed to the inner side of the remains of the obliterated umbilical artery. The first and third varieties are very rare.

Here we may also state that the obturator artery is occasionally given off from the internal epigastric or femoral, and that when the former vessel lies to the outside of the orifice of hernial sac, the obturator artery may cross closely over its neck, and dip down by its inner side to enter the obturator foramen.

Varieties in the course pursued by the sac of a crural hernia.—In a memoir published by Dr. Le Gendre he describes four rare varieties of crural hernia.† They may indeed be regarded rather as curiosities, on account of their rarity.

1. The hernia, as soon as it traverses the crural ring, passes directly internal to and behind the femoral vessels, and rests on the pectineus muscle, the aponeurosis of which sometimes forms an envelop to it; this he calls the pectineal crural hernia, on account of its situation, or the hernia of Cloquet, in honor of the surgeon who was the first to describe it. Callisen, Vidal (de Casis), M. Richet, Dr. Le Gendre, and Mr. J. Adams,‡ have recorded similar cases.

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*The anatomy of these various parts must be assumed to be known by the reader. We may, however, allude here to the importance of noticing the structure last named, viz., the fascia propria, first described by Sir Astley Cooper from a dissection made in 1800, and which is still preserved in the Museum of Guy's Hospital (no. 2508). It is an envelope which is found on the outside of the peritoneal sac, usually separated from it by a layer of adipose tissue.

†*Mem. sur quelques varietes rares de la Hernie crurale; avec 6 planches.* 8vo., Paris, 1858.

‡*Med.-Chir. Trans.*, 1860, p. 127.

2. This variety, although placed internal to the femoral vessels, is, however, rather far from them; it passes through that resisting fibrous structure which bounds the crural canal and sheath internally; that is to say, the ligament of Gimbernat. Laugier, who was the first to notice it, calls it the *crural hernia through Gimbernat's ligament*, or the hernia of Laugier. Gruveilhier, Demeaux, Nuhn, and Le Gendre, have also dissected cases of this kind.

3. This comprehends the variety of crural hernia which Hesselbach has so well described and figured.* The hernia in this case traverses several openings in the fascia cribriformis, and then presents several distinct lobes, which give it a characteristic appearance; it is *the hernia with a diverticulum through the cribriform fascia*, or the hernia of Hesselbach. Le Gendre and Malgaigne have dissected examples of this variety of rupture, which the former believes to be not so very rare.

4. Lastly, a variety in which the hernia, after having escaped beneath Poupart's ligament and traversed the cribriform fascia, sends one or more prolongations through the superficial fascia. This variety may be termed *the crural hernia with a diverticulum through the superficial fascia*, or the hernia of Astley Cooper.† Le Gendre describes a dissection of a case of this kind, and publishes a drawing of it in his work.

We may add a variety described by Mr. Partridge,‡ in which the hernia was situated external to the femoral vessels.

Development of the sac of a crural hernia.—The peritoneal sac of a crural hernia is always a secondary or acquired formation. It is never the result of a congenital defect. An opportunity of observing the early stage of a crural hernial sac commonly occurs in post-mortem examinations. The point of the finger may be pressed into a fossa, or even a sacculus, of two or three inches in length, between the femoral vein and Gimbernat's ligament. An observer is enabled, in this way, to thrust the parietal peritoneum down upon the thigh at this spot for one or two inches below Poupart's ligament. And this opportunity is most favorable for the study of the relations of the sac of a crural hernia. By degrees such a digital depression of the peritoneum at the crural ring becomes in a living person dilated into a sac by the repeated and continued pressure of the viscus which forms the hernia. The sac extends lower down upon the thigh beneath Poupart's ligament; but, instead of descending lower and lower towards the knee, it usually dilates in a direction towards the crest of the ilium, so that the long axis of the tumour lies parallel with Poupart's ligament and upon the fascia lata. When large, the tumor even overlies that ligament, and seems to occupy the region in front of the inguinal canal. But in every case of crural hernia the tumor is formed by a protrusion which has escaped from the abdominal cavity below and behind Poupart's ligament; therefore the surgeon is able to trace that structure running along its upper border.

Crural hernia rarely increases to the size of inguinal. But occasionally, after an operation for the liberation of a strangulated bowel, when the tissues around the crural aperture have been weakened by cutting them, and the sufferer has neglected to employ the support afforded by a truss, nearly the whole of the alimentary canal may protrude. In such

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De ortu et progressu Herniarum, 4to., 1816.

†*Anatomical and Surgical Treatment of Abdominal Hernia*, chap. xx.; case of Mrs. Sheffield.

‡*Trans. Path. So.* vol. i., p. 99.

cases the walls of the sac become so remarkably attenuated that the peristaltic movement of the intestinal convolutions is distinctly seen through them; so attenuated as even to excite astonishment that the vitality of the integuments should be maintained. A very rare variety, as regards figure, we once saw in a man. The tumor was of a cylindrical shape, and extended downwards and inwards over the thigh, reaching as low as the middle of that region. The great size of the tumor is not a feature of serious importance, for a very small sac, having a contracted orifice, more readily entangles the hernia and prevents its reduction.

Diagnostication:—first, from other kinds of hernia. Those with which crural may be confounded are inguinal above Poupart's ligament, and obturator below the horizontal ramus of the pubes. It would seem to be impossible, however, to mistake a crural hernia for an inguinal, or *vice versa*, if the observer will but carefully trace the outline of Poupart's ligament. But he must remember that the fundus of the sac of a crural hernia sometimes takes a course upwards, and overlies that structure. Nevertheless, the course of Poupart's ligament can be always ascertained with more or less precision; whether an inguinal hernia overlies it from above—a very rare occurrence—or a crural from below, the fingers of the examiner can still trace it from the ilium to the pubes —of course, in one case more distinctly than in another. If the whole of the tumor lies below the ligament, and its neck can be traced continuous with the crural aperture, its contents have escaped beneath Poupart's ligament, and it is a crural rupture; but, if the contrary, it is an inguinal, especially too if the neck be traceable to the internal inguinal ring. Crural is distinguishable from inguino-labial hernia by placing the finger on the spine of the pubes, or upon the attachment of the tendon of the adductor longus into that point of bone; for even in very fat persons the pubic spine can be always felt. If the tumor be to its outer side, the protrusion has escaped below Poupart's ligament, in which case it is crural rupture; if, on the contrary, it has passed through the external inguinal ring, it must be an inguinal. The same point of bone will aid in distinguishing between a pudendal hernia and a crural.

A crural hernia is much more superficially seated than an obturator, and in consequence the tumor which the latter produces is neither so prominent nor so well defined as the former. The latter escapes from the pelvis behind the horizontal ramus of the pubes, and therefore Gimbernat's ligament and the crural aperture can be felt. The elevation of the integuments produced by an obturator hernia is certainly in the locality of the crural aperture; but the depth of the tumor is its striking feature, and the facility with which the crural aperture can be felt is pathognomonic of the relations of the protrusion.

Crural hernia requires to be distinguished from other diseases which occur in the same region.

1. From *psoas abscess*.—The history of the case, the locality of the swelling, and the results of a palpable examination of the tumor, are quite different from hernia. Psoas abscess is generally preceded by pain in the back, constitutional disturbance, and inability to extend the hip-joint completely without pain. These symptoms do not accompany a crural hernia. Psoas abscess does not burrow down below Poupart's ligament at the crural ring, but to the outer side of the sheath of the

femoral vessels. But an infallible test that the tumor is formed by a circumscribed collection of fluid is obtained by placing the patient flat on the back, and then gently applying the right hand above Poupart's ligament and the left below it, or *vice versa*. When pressure is made upon the swelling with one hand only, the other is elevated; and when the action is reversed, the opposite effect takes place. With this result on manipulation of the swelling, there can be no doubt of the nature of the disease.

2. *Enlargement of the lymphatic glands.*—The correct history of the development of the swelling will aid in forming the diagnosis, especially its permanence and progressive increase. If there be a suspicion that the tumor is of glandular origin, it is well to institute a careful examination of those somewhat secluded regions in which certain specific ulcerations unfortunately occur, giving rise to angioleucitis.

3. *Dilated and varicose veins.*—We have seen a dilated vein and a tumor formed of varicose veins occupying the site of a femoral hernia; but the diagnosis was easily made by placing the patient in the recumbent posture, when the swelling disappeared. Digital pressure being made at the crural ring or upon the vein, the swelling was at once reproduced.

4. *Cysts* in the superficial fascia. Cysts are sometimes, although very rarely, developed in the region of the crural ring; in some cases associated with hernia, but sometimes without. The permanency of the swelling, its persistent and invariable size, the fluctuation discoverable on pressure, and the history of the case, are aids to correct diagnostication. When a cyst is present, and there are any symptoms suggestive of strangulated bowel, the propriety of accurately ascertaining the contents of the tumour by an exploration of its interior cannot be disputed.

Palliative treatment.—The treatment of crural hernia by the use of trusses is most important. The prevention of the dilatation of the sac is the primary point to which attention should be directed; and this may be accomplished by giving support in the region of the crural ring, especially if it be efficiently maintained.

We gladly avail ourselves of the large experience of Mr. Kingdon in offering a few observations regarding the use of trusses in this variety of hernia. In a truss to prevent the escape of a crural hernia, the spring should fall somewhat suddenly from the point where it passes around the hip, and lie along Poupart's ligament. The pad should be rather small and convex. The cross-strap should fasten high up on the shoulder of the spring, in order to keep the pad well down in the thigh. The thigh-strap should start from near the pad, and return, after encircling the thigh, to the pad itself. When Poupart's ligament, or rather the whole crural arch, is lax, and moves backwards and forwards with the varying size of the abdomen, the pad should press upon that ligament; for then the crural aperture is made smaller, and the rupture more efficiently maintained. For that purpose a larger and flatter pad is wanted. But when the crural arch is strong and steady, the smaller pad is both more effective and, by reason of its smallness, more convenient and less incommodious. Also, it is less liable to displacement by the movements of the hip-joint.

When the rupture is large, or where it comes down under the fascia lata, it is necessary to use a thigh-belt, with a triangular pad projecting on the inner surface, and forming a soft continuation of the pad, to fill the triangular space where the cribriform fascia occupies the saphenous opening of the fascia lata.

Sometimes after an operation, in which Gimbernat's ligament has been freely divided, a cross tongue in addition, to buckle to the free end of the truss is needed.

Irreducible crural rupture of course requires a hollow pad, whether epiplocele purely, or enterocele.

Attempts have been made to effect a radical cure of crural rupture by a cutting operation. The patients recovered from its effects; but we have no data by which to arrive at any conclusion as regards the advantages obtained.

Crural hernia is much more common in the female sex than in the male. But the general belief that it is much more common in women than inguinal, does not appear to be founded on facts. The following table demonstrates the proportions in which they occur. The comparative numerical equality is explained by the circumstance, that before puberty inguinal hernia is common, whilst crural is extremely rare. In 193 girls before 15 years of age, Mr. Kingdon met with 184 cases of inguinal rupture, and only 9 of crural. Even to the age of 20 years, the cases of inguinal hernia are much more common than femoral, as the following table shows. In a total of 1442 ruptured females, at all ages from birth upwards, the majority of the cases of crural hernia over inguinal was only 54.

After twenty years of age, crural hernia is much more commonly developed than inguinal.

DECADES.	INGUINAL.	FEMORAL.	
Birth to 10 years	146	1	
11 to 20 "	108	37	
21 to 30 "	153	180	
31 to 40 "	164	252	
41 to 50 "	76	158	
51 to 60 "	33	84	
61 and upwards	19	36	
Total	694	748	—1442 cases.*

Total cases of femoral	748
Deduct cases between 20 and 40 years	432
At all other ages	316
Deduct cases before 20 years of age	38
After 40 years of age	278

This table demonstrates a fact for which the pathologist will be scarcely prepared, viz., that the largest number of cases of crural hernia is developed during those years usually termed the prime of life, *i. e.*, in women between twenty years old and forty.

But it must be observed that this happens to be that period of life when parturition is most frequent, and when consequently the peritoneum and the tissues of the abdominal walls become much stretched by the development of the gravid uterus. Their power to resist the weight of the abdominal viscera becomes diminished; hence a cause of their protrusion.

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*This table was made from Mr. Kingdom's reports of the City-of-London Truss Society for the years 1860 and 1861. It shows the ages of the individuals at the time of first discovering the hernia.

M. Malgaigne states that inguinal hernia is even more common in females than crural. *L'Union Med.* 1854, p. 154.

To ascertain whether there was any relation between the development of hernia and parturition, Mr. Kingdon made the following table of 680 ruptured females, and found the proportion of mothers to be as follows:*

	INGUINAL.	FEMORAL.
Infants and girls under 16 years	87	3
Single women	50	61
Mothers	178	262
Married women who had not borne children	19	20
Total	334	346—680

And next, with a view to ascertain the influence of repeated pregnancies upon the development of hernia, he examined 442 women who had been mothers before discovering the hernia. Of these, 180 women were afflicted with inguinal, 262 with femoral; which gives a majority of 82 in favor of femoral. The influence of the first pregnancy is very remarkable.

442 women had been mothers before discovering the hernia:

	INGUINAL.	FEMORAL.
67 had borne one child	27	40
51 " two children	26	25
53 " three "	22	31
55 " four "	23	32
40 " five "	15	25
25 " six "	8	17
34 " seven "	15	19
30 " eight "	13	17
25 " nine "	7	18
19 " ten "	10	9
16 " eleven "	5	11
8 " twelve "	4	4
4 " thirteen "	2	2
10 " fourteen "	2	8
3 " fifteen "	—	3
1 " eighteen "	1	—
1 " nineteen "	—	1
442	180	262—442

By a preceding table the fact was demonstrated that crural hernia is most commonly developed between 20 years of age and 40. Now as we know that there is a much larger number of females alive between 20 and 40 years of age than above 40, we might conclude that the number of cases of crural hernia is in proportion to the number of the population at any respective age. Under 20 years of age this is certainly not the fact, for the population at those early ages of life is of course the largest, whilst cases of crural hernia are exceedingly rare. The cause of the frequency of inguinal hernia during the early life of females has been before explained.

It is highly interesting to compare the frequency of crural hernia at various ages with the numbers of the female population of London at the same periods of life; and in this inquiry we have made use of the census-table of 1851,† and Mr. Kingdon's statistics before alluded to. From those data the subjoined table is arranged.

Report, 1860, pp. 10, 11.

†Census, 1851, vol. i., p. 193, table ii.

		CRURAL HERNIA.
Females under 20 years	493,260	38
" from 20 to 40 years	453,809	432
" " 40 upwards	308,609	278
	1,255,678	748

This shows the number of cases of crurai hernia in a million females:

Under 20 years to be	77
Between 20 and 40	952
Above 40	901

Doubtless this calculation can only be considered as approximating to numerical accuracy; but it seems to demonstrate the truth of the general proposition, that females between the ages of 20 and 40 years are most liable to the development of crural hernia under certain conditions. The cause of this liability is probably due to the natural condition before alluded to, coupled with its attendant circumstances, and the occupations of the class of persons which would apply to public charities; as well as, perhaps, to configuration, and some predisposing causes, or hereditary influences.

Morbid states of the crural hernia.—An irreducible crural epiplocele is very often seen; an enterocele in the same state is very rare. With a view to ascertain whether the strangulation of the bowel was in any degree influenced by the accompaniment or absence of omentum, we made an analysis of 61 cases of strangulated crural hernia, which came immediately under our own care for operation. The proportions were equal; their being 31 pure enteroceles, 30 entero-epiploceles.

A reducible crural epiplocele may at any time become inflamed, give rise to local pain, and increase in size. The local application of cold, and absolute rest, are the measures to be employed to prevent adhesion between the rupture and its sac. This condition of an omental rupture in the groin is sometimes mistaken for angioleucitis. But the history of the case, and the negative evidence derived from the absence of every primary cause of lymphatic irritation, should suffice to remove all difficulty in a diagnosis.

Both Pott and Astley Cooper allude to circumstances which are of vital importance in the treatment of crural hernia, viz., the difficulty often experienced in the reduction of a small recently-developed enteroceles, the rapidly extending injury of the bowel, and the severity of the constitutional symptoms which are excited by that condition. But these features have been more fully insisted upon by Mr. Bryant in a careful investigation of the cases admitted into Guy's Hospital.* Out of 142 cases of strangulated crural hernia, only 38 were reducible by the taxis. This, of course, is explicable by remembering that the majority of such cases is not sent to the hospital until the further use of the taxis is evidently unjustifiable. Ten of these cases were of recent development, that is, they were strangulated on their first recognized descent. This is an important feature in crural hernia, bearing especially on the results of treatment in these cases. It is cases of this kind which are so frequently overlooked by the medical attendant. He suspects that the symptoms exhibited by the patient are referable to a rupture, and he asks the question whether there is any tumor to be felt in the groin or elsewhere. Receiving a reply in the negative, he is content therewith. But that should not satisfy him. The surgeon should carefully examine the crural rings, and the other regions in which a hernial tumor may exist.

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* *Guy's Hospital Reports*, 1861.

The mortality arising in cases of strangulated crural hernia of all kinds is very large; but in those where the bowel becomes strangulated on the first descent, the death-rate is the largest. The experience of a large number of these cases teaches that the bowel should be liberated as soon as possible, and, if the taxis be not successful when the patient is fully under the influence of chloroform, that the cutting operation should not be delayed a moment.

The youngest girl we have heard of suffering with strangulated crural hernia was between eight and nine years old.

Application of the taxis.—The patient should lie on the back, with the hip-joint more or less flexed. The surgeon, taking a position most convenient for the purpose, gently compresses the whole swelling, at first endeavors to diminish its size by pressing any serous effusion that may happen to be in the sac into the abdomen, and next to empty the bowel of its contents. Then recalling to mind the site of the crural ring, he presses the bowel backwards, inwards, and upwards.

The operation of liberating the strangulated bowel by incision.—The tissues to be divided to expose the sac are, the integuments, the superficial fascia, the fascia propria, and often a layer or covering of fat. The points to be particularly observed as guides for the safe and certain manipulation of the sac are, first, Poupart's ligament in front and above it; and, secondly, Gimbernat's ligament at the pubic border of its neck.

Slight variation in the line, direction, or figure of the incision through the integuments is admissible, according to the inclination of the operator; but for all practical purposes we prefer a linear incision of from three to four inches in length. It should cross over the pubic side of the neck of the tumor, and extend on to the abdomen about one inch above Poupart's ligament. Its form being slightly concave, the neck of the tumor is embraced by the concavity. The integuments and superficial fascia being divided, a well-defined, membranous sac is usually seen, and the operator should next display clearly Poupart's ligament above the tumor, and feel Gimbernat's ligament to the pubic side of its neck. This covering is the fascia propria. Next, he may pass a hernia bistoury, with great care, between the last-named ligament and neck of the tumor, outside the fascia propria, and, directing its sharp edge upwards, cut a few of the fibres of Gimbernat's ligament, or of those which unite the falciform process of the fascia lata to it (Hey's ligament), and thus enlarge the crural ring. This done, the reduction of the rupture may sometimes be effected by the application of gentle pressure upon the contents of the sac. This proceeding constitutes the minor operation. It is simple, safe, and well adapted to the cases of recent enteroceles which have been strangulated a very few hours, and when there is reason to believe that the bowel has escaped injury by the taxis. Obviously, therefore, it is only justifiable in select cases.

Failing to reduce the contents of the sac, the fascia propria is next carefully divided upon a grooved director, and a layer of fat is very frequently exposed. Inexperienced operators, mistaking this fat for the omentum, are puzzled when they cannot find the bowel, or they mistake the peritoneal sac for intestine when that is seen upon clearing away the fat. The hernial sac being exposed, it should be traced upwards to the crural ring, and the fascia surrounding it in the crural canal divided; or the division of the structures forming the crural canal having been reserved for this special moment, must now be undertaken, as before described. But the hernia remains irreducible. With great care, and *secundum artem*, the sac must now be incised. Through the first puncture a stream of serum usually flows. Empty the sac of the fluid by enlarging the opening sufficiently to reach its orifice. If nothing but omentum be seen, carefully raise it from below or gently unravel it, and towards the mouth of the sac, secreted behind that part of the omentum which has just escaped through its mouth, the bowel will be seen. Next, to enlarge the orifice of the sac, introduce the point of the finger between the protrusion and Gimbernat's ligament; but if that cannot be done, the hernia bistoury must be insinuated in front of the omentum, directing its cutting edge forwards and holding the blade parallel with the linea alba. Having then liberated the bowel from its constriction, it is easily returned into the abdominal cavity. It is not always necessary to cut the orifice of the sac, after having divided the tissues outside of it, as before described. Its tissues frequentlyyield before the gentle introduction of the finger.

Arrange the wound in such a manner that an opening exists at the lower-most angle for the escape of the discharge, and flex the hip-joint by placing a pillow beneath the popliteal region for the limb to rest upon. Any further special detail for the treatment of the case is here unnecessary.

Mr. Kingdon has informed us that the extent to which Gimbernat's ligament is divided is a subject of grave importance as regards the future comfort of the patient. He states that Hey's ligament should rather be cut than Gimbernat's, and that when the latter is at all extensively divided, it is almost impossible to retain the hernia after the thickening, subsequent to the operation, has passed off. Certainly the most prodigious crural hernial tumors we have seen occurred in women upon whom an operation had been performed for strangulated bowel.

Arteries, cut during the progress of the operation, should be immediately tied.

Wound of the obturator artery.—This blood-vessel, when it passes to the obturator canal, after dividing from the internal epigastric or femoral, lies close to the neck of the sac, and it has been occasionally cut at the same moment as its orifice. Before using the knife, it might be practicable to feel the pulsations of this artery with the tip of the finger. When cut, an attempt should be made to arrest the bleeding by tying the ends of the wounded vessel.

Omental sacs are most commonly met with in cases of crural hernia. An account of them has already been given.

(*Continued in December No.*)

ABBREVIATIONS AND EXPLANATIONS
USED IN THE METEOROLOGICAL TABLES.

0 to 10—When applied to Winds, signify, 0 a calm or no wind; 10 a tornado; 2-4 a fine brisk wind; 3-5 a gale or nearly, and so on, less or more.

0 to 10—When applied to clouds, signify, 10 the sky entirely overcast with clouds, 0 a clear or cloudless sky.

Ci—A cirrus cloud, a high, light, fibrous, feathery cloud.

Cu—A cumulous cloud, known often as the thunder head or cloud, a heavy mass with well defined base and circnlar edges, piled mass on mass.

Str—A stratus cloud, a long, well defined horizontal cloud, usually near the horizon; usually foretokens rain.

N—Nimbus cloud, ordinarily known as the rain cloud, an evenly distributed cloud usually overcasting the sky.

CiCu—The cir. and cu. clouds, each as distinct and separate, while the cir., from being first named is predominant, at least in quantity.

CuCi—Cumulus and cirrus, each as distinct clouds, while the cumulus prevails most as regards quantity.

CC—The ci. and cu. clouds combined or conglomerated in the same cloud.

CCCI—The ci. and cu. combined in one or the same class of clouds, with the cirrus as a distinct cloud. The CC in this case being most prevalent.

CuCC—The cumulus cloud, as a distinct and prevailing cloud, yet cotemporary with the ci. and cu. as a combined cloud.

CiStr—The cirrus and stratus clouds, each distinct and separate, while as here placed the cir. would be most in quantity.

CCS—The cir., cum. and stratus, as one cloud, or as the three clouds conglomerate, the CC cloud assuming more or less the stratus form.

CiS—One cloud form, in which, while the ci. prevails, there is yet a tendency to assume the stratus form.

CuS—The cumulus cloud, assuming a stratus form, yet being still more cum. than stratus,

CCN—The CC cloud blending with the nimbus, or tending toward the nimbus form, yet rather cc. than n.

NCC—The nimbus cloud mostly prevalent, yet not wholly so, having somewhat the appearance of cc., at least in degree.

DCi—The cir. cloud in its origin, yet the cir. becomes diffused, and hence approaches the n. form, but not so dense—Diffused Cirrus.

CiDCi—Would indicate the cir. as a distinct cloud, and also the dci. as distinct, yet the ci. as prevailing most.

FC—A cloud not uncommon here, being the cloud formed by a fog as it rises from the earth—Fog Cloud.

FCR—It is not unusnal to see a hazy appearance as of a cloud arising from a fog yet running often very rapidly in an under current of wind—Fog cloud running.

Ths., a thunder shower; Th., thunder; L., Lightning; Shr. for shower; R. for rain; Spr. for sprinkle; R, or with a —— line after it, is a continned rain for the time indicated; Shrw. or Thsw., shower or thunder shower to the west: the same of other points.

In noting certain trees in blossom, the note is only made after the tree begins to assume a general appearance of blossoms—of the peach, plum and dwarf pear. The same trees have been observed thus far (March, 1865,) and the same will hold good of others. Mere scattering blossoms are not regarded.

Mean.—The Bar. and Hyg. Mean is by dividing the two extremes. The Ther., force of winds, and am't of clouds, by adding obs. together and dividing by the number.

At Houston, the Barometer was about 50 feet above the Buffalo Bayou, and probably 55 ft. above the Bay of Galveston. The Thermometer, up to the 3d March, 1863, was probably affected slightly by reflection, but protected after that date, being from the 1st of Sept., 1862, behind a pillar of a gallery or porch, fronting about SSW, and about 6 feet from the ground. The Rain Guage was not in a good exposure, being too near buildings adjacent, but not so near as materially to injure its indications, and was about 6 feet from the ground. The Hygrometer was in doors, but subject to a free circulation of air, but not to a direct draught.

At Galveston, the Barometer is probably 25 to 30 feet above the Bay, on the second floor. The Thermometer has a good exposure behind a pillar of a gallery at the house, first floor, and house fronting about South East, and is slightly, if at all, affected by reflection. The Rain Guage is about 18 feet from the ground and too near a building, and may be affected by rains from the W, NW and N, though not materially. The Hygrometer is within doors, yet exposed to a free circulation of air, but not a draft of air. The obs. of the wind, for some months, are not as accurate as could be desired, being taken in part from a vane and in part from general indications.

DR. MASON'S HYGROMETER.

TABLE OF DEGREES.

MASON'S HYGROMETER.		DRYNESS, DRYNESS × 2, ABSOLUTE DRYNESS.		LESLIE'S HYGROMETER COMP'D WITH MASON'S.
Degrees of Dryness obtain'd		Excess of Dryness to be Added.	Absolute Dryness Existing.	
..0	..	...0.00	...0.000	 0
..0	.5	...0.083	...1.166	 3
..1	..	...0.166	...2.332	 6
..1	.5	...0.249	...3.499	 9
..2	..	...0.333	...4.666	12
..2	.5	...0.416	...5.833	15
..3	..	...0.500	...7.000	18
..3	.5	...0.583	...8.166	21
..4	..	...0.666	...9.332	24
..4	.5	...0.749	..10.499	27
..5	..	...0.833	..11.666	30
..5	.5	...0.916	..12.833	33
..6	..	...1.000	..14.	36
..6	.5	...1.083	..15.166	39
..7	..	...1.166	..16.332	42
..7	.5	...1.249	..17.499	45
..8	..	...1.333	..18.666	48
..8	.5	...1.416	..19.833	51
..9	..	...1.500	..21.0	54
..9	.5	...1.583	..22.166	57
.10	..	...1.666	..23.332	60
.10	.5	...1.749	..24.499	63
.11	..	...1.833	..25.666	66
.11	.5	...1.916	..26.833	69
.12	..	...2.000	..28.0	72
.12	.5	...2.083	..29.166	75
.13	..	...2.166	..30.332	78
.13	.5	...2.249	..31.499	81
.14	..	...2.333	..32.666	84
.14	.5	...2.416	..33.833	87
.15	..	...2.500	..35.0	90
.15	.5	...2.583	..36.166	93
.16	..	...2.666	..37.332	96
.16	.5	...2.949	..38.499	99
.17	..	...2.833	..39.666	...102
.17	.5	...2.916	..40.332	...105
.18	..	...3.000	..42.0	...108
.18	.5	...3.083	..43.166	...111
.19	..	...3.166	..44.332	...114
.19	.5	...3.249	..45.499	...117
.20	..	...3.333	..46.666	...120
.20	.5	...3.416	..47.833	...123

By the Table of Degrees is shown, without calculation, the absolute dryness of the atmosphere in degrees of Fah'ts Thermometer. Observe the number of degrees the two Thermometers differ, which are here called the degrees of dryness, and found in the first column of the table. The second column merely contains the figures, which have been added to the Degrees of Dryness in the first column and multiplied by 2 to obtain the answer put down in the third column.

EXAMPLE.—The temperature of the air, 57°, shown by dry bulb; wet bulb, 54° or 3° of dryness observed; then add 0.6 excess of dryness, and multiply by 2, which will give 7° of absolute dryness existing.

To find the Dew point, subtract the absolute dryness from the temperature of the air.

EXAMPLE.—Take 57°, subtract 7, and the dew point will be 50°.

The comparison of Dr. Mason's with the Dew point Hygrometer, and of Mr. John Leslie's, will be seen in the same line of the first, third and 4th columns of the table. To find quantity of vapor by weight, see Table of quantity.

Prof. Daniel's Hygrometer is registered by the third column.

METEOROLOGICAL TABLE FOR SEPTEMBER, 1862, AT HOUSTON.

FINE.		BAROMETER. A. M.	BAROMETER. P. M.	MEAN OF BAR.	WINDS. A. M.	WINDS. P. M.	SUN RISE.	1–3 P. M.	SUN SET.	MEAN THER.	CLOUDS. A. M.	CLOUDS. P. M.	RAINS, FOGS, &C. A. M.	RAINS, FOGS, &C. P. M.	RAINS, FOGS, &C. NIGHT.
Mon.	1	95, 97,	89, 90	29.93	SE2, W3	S3, W3, SE0	80	80	79	80			fog, spr	shr, shr	R
Tues.	2	94, 99,	96	29.96	S2, W3, SW2.	SE4, SE1	77	81	80	79			shr	shr	
Wed..	3	96, 03,	98	30.00	SE1, SE2, S3.	w1, sw2, s3, sE1	78	81	81	80			spr, shrSE	shr, spr.	
Thurs	4	98, 06,	04	30.02	SE0, S4	S2, S4, S2	81	85	83	83			ths		
Fri...	5	05, 08.	04	30.06	SE1, SE5	S3, S1	79	86	82	82			spr	spr	
Sat...	6	05, 07,	98	30.03	0, SE1	S2, W2, S2, W2	78		77	79			shr	ths, shr	
	7	00, 06,	97, 98	30.01	0, S2, SE3	S1, S3, S3	78	83	82	81					
Mon.	8	00, 06,	98, 00	30.02	0, SE1, SE3	SE2, SE1	78	84	82	81					
Tues.	9	04, 06,	98	30.02	0, E1, SE2	SW2, SW1, S2	78	86	83	82					
Wed.	10	00, 03,	97, 98	30.00	0, S2	S4, SW5, S3	79	87	84	83				shr	
Thurs	11	00, 06,	97	30.01	0, S1	S3, 0	80	80	80	80			spr, thsE		
Fri...	12	00, 05,	96, 97	30.01	0, E2 SE4	E2, s2, w3, E2	79	85	79	81					spr, ths
Sat...	13	98, 00,	96, 97, 96	29.98	SE1, E3	SE4, S4, SE5, SE1	76	81	78	78			spr	shr	shr
	14	00, 05,	01, 02	30.02	0, E2, SE4	E4, S2, S1	76	82	83	80			fog	spr	shrW
Mon.	15	03, 06,	95	30.01	0, N1, N2	W2, 0	78	86	84	83			fog		
Tues.	16	93, 95,	83, 84	29.89	0, W2, W3	W4, 0	78	88	85	84					
Wed.	17	87, 92,	86, 90	29.89	0, W4, SW3	S4, S1	79	89	85	84				shrS	shr N & SW
Thurs	18	95, 02,	97, 01	29.98	0, E2, E3	SE2, S2, S1	79	86	83	83			shrSW	shr, shrS	
Fri ..	19	05, 10, 09	06	30.07	0, E2, E3	E4, E1	75	84	84	81					
Sat...	20	07, 09,	02, 04	30.06	0, E2, NE2	N3, N4, 0	75	83	81	79					
	21	02, 04,	96	30.00	0, NE2	NE4, NE3, 0	70	79	78	76					
Mon.	22	96, 98,	93	29.95	0, N3	NE2, E3, 0	70	81	82	78					
Tues.	23	95, 98,	94, 95	29.96	0, N3	N3, N3, 0	74	86	84	81					
Wed..	24	98, 01,	95	29.98	0, N3	N4, N5, NE3, NE5	75	85	80	80					shr, shrSW
Thurs	25	96, 00,	92	29.96	N1, NE4	NE4, NE1	76	84	80	80					
Fri ..	26	94, 96.	86	29.91	0, NE2, NE3.	NE3, E3, E1	76	85	84	82					
Sat...	27	86, 89,	83	29.86	0, N1, N1, E3.	E3, S1	76	86	82	81					
	28		90, 86, 90	29.87		SE3, SE3, S1		86							thsNW
Mon.	29	95, 01,	97	29.98	o, E1, SE2, S4	S4, S1	77	88	83	83					
Tues.	30	98, 02,	96, 97	30.00	0, S1	S5, S5, S4	78	88	84	83					

Max. range, 30.'10; Min. 29.'83; 29.'98.13, mean for the month; 80°50. mean of month; max. range, 89°; min. 70°. 2d—Shr'y about town at distance all day; rainbow 7 A. M. 5th—Rainbow 2 P. M. 6th—Much water fallen. 11th—Thrs. to E, to S and W, from 10 A. M. to 12 M. 12th—Shr'y at distance, ths. about 8 P. M. (wrongly placed.) 17th—Norther 8 to 9. M.

NOTE—From the first *observation* in the morning to the second, the Mercury of the Barometer will rise or fall as the case may be, and then fall till the next obs., and so on through the day. The *time* of obs. will be known by their position in the columns—the first being between daylight and sunrise, and the last between sunset and dark. The Thermometrical obs. of this month not very reliable, as the Ther. was in doors, yet may give a general idea only. Obs. of Wind, the same note will hold good till a change occurs—0 to 10 being strength, 0 a calm, 10 tornado. Obs. of the Clouds are so imperfect that I have omitted them.

METEOROLOGICAL TABLE FOR OCTOBER, 1862, AT HOUSTON.

TIME.		BAROMETER. A. M.	BAROMETER. P. M.	MEAN OF BAR.	WINDS. A. M.	WINDS. P. M.	SUN RISE	1-3P M	SUN SET	MEAN THER.	CLOUDS. A. M.	CLOUDS. P. M.	RAINS, FOGS, &C. A. M.	RAINS, FOGS, &C. P. M.	RAINS, FOGS, &C. NIGHT.
Wed	1	97, 02	96	29.99	S1, S2-4	S2-5, S2-3	85	89	86	....	cc2, cicu8	cu5, cicu5, cu1	spr, shrW&	NE.	
Thurs	2	00, 05	99, 00	30.02	0, S1-3	S4-5, S1-3	81	90	85	....	0, cc1, cc7	cccu6, cicu4.........0	....	....	
Fri	3	05, 08	04	30.06	0, S1-2, S2-3	S2-4, S1-2	80	88	84	....	cc3, cuccstr2	cccu7, cicu3.........0	....	shr W&NW	
Sat	4	08, 12	08, 09	30.10	0, S1-2	S1-2, S2-3, 0	80	89	86	....	ccstr3, cu1, cccu8	cc3, cc2.........0	....	....	
	5	10, 13	07....06	30.09	0, NE1-2, E2-4	E3-5, E2-3	79	88	84	....	0, 0, cc4	cucc6, cu4, ci1.......0	....	....	
Mon	6	03, 05	96	30.01	0, S1-2, S7-8	S4-5, S1-2	80	88	84	....	ccstr6, cc3	cicustr5, ccs3, cicu2	shrw&slight	........,spr	
Tues	7	93, 94	82	29.88	0, S2-4	SE4-5, S3-4	80	88	83	....	cicu2, cc5, cucc5	cucc5, cc3..........0	....	....	.........shr
Wed	8	82, 84	76	29.80	S1-3, SW4-6	s4-6,2-3,3-5,1-3	80	81	80	....	cicustr9..........cc	cu10, cccu9, cicustr6	shr——	——	.....spr, shr
Thurs	9	82, 86	83, 84	29.84	S1-2, S1-3	S1-2, S1-2, S1-2	75	75	77	....	ccn10	ccn10, ccn10, ccn7	shr, ths	........spr	..........spr
Fri	10	91, 98	97, 00	29.96	NW2-3, N2-4, 3-5	N4-6, N3-5	66	68	65	....	0, n10..........cc	n9, ccn10, ccn10	....	....	.....spr, shr
Sat	11	11, 14, 10	06	30.10	N3-4, N3-5	N2-4, N1-2	55	62	60	....	ccn10....0	0..........0..........0	....	....	....
	12	04, 08	97....94	29.99	0, N1-2	N1-2, N1-3, N1-2	52	64	62	....	0........0	0..........0..........0	....	....	....

Monday, 13th—Left town on account of yellow fever. Returned November 25th.

Several Northers, and some severe weather. Sugar cane much injured by freezing. Spent most of my time in Brazoria county. Yellow fever very mild in Houston, some doubt if there was any at all. Yellow fever very malignant at Matagorda and Sabine Pass and Lavaca. Large meteor seen and heard in western part of Brazoria county, about 10 o'clock on the 22d or 23d at night—explosion like a Columbiad, but having two reports nearly simultaneous.

General Remarks.—1st—showery, very light. 3d—showery, very light. 11th—first strong Norther.

METEOROLOGICAL TABLE FOR NOVEMBER, 1862, AT HOUSTON.

TIME.		BAROMETER. A. M.	BAROMETER. P. M.	MEAN OF BAR.	WINDS. A. M.	WINDS. P. M.	SUN RISE	1-3P M	SUN SET	MEAN THSR.	CLOUDS. A. M.	CLOUDS. P. M.	RAINS, FOGS, &C. A. M.	RAINS, FOGS, &C. P. M.	RAINS, FOGS, &C. NIGHT.
Wed	26	28, 31	22	30.27	N3	N2..........N1	45	58	56	....	0..........0	0..........0	frost	....	
Thurs	27	14, 15	05	30.10	0....W3	W2....0	40	60	58	....	ci..........0	ci..........0..........0	frost, hazy	.......hazy	
Fri	28	06, 06	90	29.98	0....W2	NW2, W2, W1	43	60	62	....	0..........ci	0..........0..........0	hazy		
Sat	29	87, 94	84, 85	29.89	0....W1	sw3, sw3, sw1				....	0..........ci	cistr3.....ci3.....cc4	hazy		
	30	85, 87	86, 87	29.86	S2...W5	W5..SW2-5				....	cicu4......cc6	cc5..........cccu10	....		

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Hernia—Rupture.

(*Continued from November No.*)

Obturator hernia.—The obturator canal is situated at the upper and outer part of the obturator or thyroid foramen, and is bounded above by the horizontal ramus of the pubes, and in other parts of the obturator membrane or ligament and the obturator muscles, which are attached to its internal and external surfaces. The muscle within the pelvis is covered by the internal abdominal fascia, that outside by the obturator fascia. The obturator nerve, artery, and vein pass through the canal from the pelvis to the thigh. The course of the cutaneous filaments of this nerve should be especially noticed; for as its trunk is in close proximity to the hernial tumor, the pressure which the latter makes against it induces pain in those regions where the filaments of the nerves are distributed. In some cases this fact may prove a valuable aid in diagnosis, as the sequel will show.

This rare variety is described as hernia through the obturator canal, the foramen ovale, thyroid or obturator foramen, and sub pubic femoral. In the early part of the last century M. Garengeot,* called the attention of surgeons to this kind of hernia, which, after having escaped from the pelvis through the obturator canal, forms a swelling among the abductor muscles and in the pubic region of the thigh. The neck of the sac lies behind the horizontal ramus of the pubes, occupies the obturator canal, and makes its way sometimes between the uppermost fibres of the external obturator muscle, at other times above them. The fundus and body of the sac are covered by the fascia of that muscle. By the dissections of several cases, the obturator vessels and

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**Mem. de l' Acad. Roy. de Chur.* t. i, part iii, nerve are shown to be differently placed as regards the tumor. Vinson* states that he found the artery six times to the outer side of the sac, six times to the inner side, and three times behind it. The relative position of this artery to the sac probably bears some relation to its origin. In Mr. Stanley's case,† both artery and nerve were above the hernial sac; the former to its inner side, the latter towards it outer.

Both sexes are liable to the formation of this hernia, but a large majority of the cases on record occurred in females. The anatomical reasons for this are obvious.

There are cases on record in which this hernia had existed, and in which the viscus was strangulated without any local signs of a tumor. Mr Hilton's case,‡ in which the entire calibre of the ileum was in the sac; and Mr. Tebay's,§ in which only a part was found, are marked illustrations. In Mr. Obre's case,‖ "the eye detected a slight degree of fullness in Scarpa's triangle," and "a distinct hardness could be felt, slight in its extent." In the only instance we have seen, the hernia gave rise to a very distinct, well-defined tumor, deeply seated among the adductor muscles, to the pubic side of the femoral vessels. In Mr. Stanley's case, a crural epiplocele existed on the same side as the obturator entro-epiplocele. The latter was, however, extremely small, and produced "no swelling on the inside of the thigh." The hernia "was found with its peritoneal sac beneath the obturator externus muscle, between the muscle and the obturator fascia."

The foregoing observations illustrate the difficulties which attend the detection of protrusion through the obturator canal.

We have collected twenty-five of the most recently recorded cases of this variety of hernia, and the remarkable features they present are well worthy the attention of the reader. They may be divided into two classes: the first embraces a large majority, and consists of those cases in which the hernial tumor was not discovered during life; the second, those in which it was discovered by palpable examination, either immediately at the inner side of the thigh, or, as in one instance, only by an exmination per vaginam.

In several of the cases of the first class, the tumor produced by the protrusion was so small, that the sac, with its contents, being placed deeply among the adductor muscles and beneath the pectineus muscle, could not give rise to any local external swelling. In two cases the tumor was found between the obturator ligament and obturator externus muscle. The contents of the sac in six cases consisted of only a portion of the calibre of the canal of the intestine. This had, however, become converted into a diverticulum, in some instances of considerable length. We meet with this condition of the hernia occasionally in other regions, but the cases are not common; and we may therefore conclude that, in proportion to the rarity of obturator hernia, this may be considered to be one of its remarkable features. In one case, the Fallopian tube and ovary formed the contents of the sac; in another, a portion of the urinary bladder.

The hernial sac, which is never wanting, consisted always of a portion

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*Gunther's *Lehre v. d. blutigen Operationen*, Abschnitt xv., § 146.
†*Trans. of the Path. Society*, vol. iii., p. 91.
‡*Med, Chir. Trans.* xxxi., p. 323.
§*Med Times and Gaz.*, vol. ii., p. 270, 1852.
‖*Med.-Chir Trans.*, xxxiv. p. 233.

of the parietal peritoneum of the pelvis thrust through the canal, and tolerably firmly attached to the parts with which it was in contact. The sac was therefore slowly formed. On this account some of the patients had experienced, during the development of the hernia, repeated attacks of bowel derangement, evidenced by symptoms of obstruction, termed colic pains, uneasiness at the inner and upper part of the thigh, and even cramp or spasmodic pains in the muscles of the femoral region, and which extended down the leg.

In a large number of the cases, the acute pain in the course of the obturator nerve, described by the patient, was a marked feature of the case, and pressure over the site of the external aperture of the obturator canal gave rise to paroxysms of pain of great severity. It is due to the tact of Mr. Howship* to state, that he seems to have been the first writer to dwell particularly upon this fact, which some years afterwards was strongly insisted upon by Romberg.† The only patient we have seen with this variety of hernia complained bitterly of feeling a sudden pain at the upper and inner part of the right thigh, which extended thence down the inside of the limb to the knee, front of leg, foot, and great toe.

The cases of the second class are those in which the tumor was discovered during life, either in consequence of its bulk, or by a careful examination of the region in which it was developed. Dr. Roeser‡ proposed that advantage should be taken of the rectal passage of the male, and the vaginal of the female, to institute a more searching examination of the obturator region within the pelvis; and by this means Dr. Lorinser, in 1857, discovered an obturator hernia.§ Mr. Nuttall, of Leicester, in the same year, in a case in which not even fulness of the adductor fossa was perceptible, was induced, by the severity of the constitutional symptoms of strangulated bowel, and the pain caused by local pressure made directly upon the obturator region, to explore that part; and his judicious treatment was rewarded by the discovery of a very small hernial tumor, the contents of which were returned into the abdominal cavity by gentle pressure, without incision of the sac.‖ Before this Mr. Obre had successfully operated upon a case of strangulated obturator hernia, in 1851, in which "the eye detected a slight degree of fulness in Scarpa's triangle, on the right side;" this triangle of the opposite limb being well marked with a hollow or depression passing down its centre, but which was lost on the affected side. Also, on pressing firmly "a little below the saphenous opening, a distinct hardness could be felt." Lastly, in the case successfully operated upon by Mr. B. B. Cooper, in 1853, the woman being very thin, there was both ocular and palpable evidence of an indisputable nature. At first sight, the swelling in Scarpa's triangle seemed to be identical with that which might be produced by a protrusion through the crural canal; although it had not the appearance of being in close relation with Poupart's ligament, for it formed a somewhat globular fulness, rather than a circumscribed tumor. Then the point of the finger could be placed in the crural ring, which of course was

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*Howship's *Practical Remarks on the Discrimination and Appearances of Surgical Disease*, 1840, p 323. Prep. in Mus. Coll. Surg., no. 1359.

†Romberg in Dieffenbach's *Operative Cirurgie*, b. ii., p. 621, 8vo. Leipzig, 1848.

‡*Archiv. f. Phys. Heilkunde*, 1851, p. 142, et. seq.

§*Lehre blutigen Operationen*, Abschnitt xv., § 147.

‖*British Medical Journal*, p. 566, 1857.

conclusive evidence that the hernia had not escaped through it. Really, therefore, there were no practical difficulties to prevent the formation of a correct diagnostication in this case. We may here state that these observations are made from notes of the case taken personally at the bedside of the patient.

Complications.—But we must allude to a class of cases, of which there have been several instances, in which the existence of an obturator hernia was complicated with the development of other kinds especially those in the inguino-femoral regions. In one case there was a reducible crural hernia on either side; in three cases a crural hernia on the same side as the obturator; in one case, on the opposite side; and in another case, an inguinal hernia on the same side as the obturator.

The treatment adopted in three of these cases was that which most surgeons would approve. The symptoms of strangulated intestine being clearly marked, an exploration was made of the hernial sacs, which were visible and tangible, in the expectation of finding a small knuckle of bowel retained within them. But nothing of the kind being found, the examination was not prosecuted further; although, in two of the cases, an obturator hernia, seated immediately beneath the site of the operation, was proved, by after-death examination, to have been the cause of death.

As a possible complication, we must here allude to the fact that, in some of the cases, in the same individual, a sac was found to pass through both right and left obturator canals.

In fourteen of the cases the obturator hernia was not discovered until after death. In one case the symptoms indicated the existence of this variety of hernia, and the patient recovered without any interference on the part of the surgeon. In ten of the other cases the protrusion through the obturator canal was discovered during life; and the treatment adopted and its results we may briefly describe. In one case the protrusion was reduced after the application of the taxis by Dr. Roeser, of Bartenstein. This was in a female thirty years of age, rather corpulent, who had been frequently troubled with intestinal disturbance. By careful manipulation a small tumor was felt over the external aperture of the left obturator canal, upon which pressure caused great pain.* In another case, Dr. Roeser was not so successful in the treatment. This was a male, fifty years old, who had been frequently troubled with pains in the abdomen, called colic. The case was rendered obscure by enlargement of the inguinal glands on the same side as the hernia; nevertheless Dr. Roeser diagnosticated the obturator rupture, and partially reduced it. The man, however, died, and after death a part only of the wall of the intestinal tube was found in the sac.† In one case the obturator hernia was discovered during life after the performance of gastrotomy.‡ Dr. Arntz saw a woman, sixty-two years old, when she had been suffering three weeks. He discovered and diagnosticated an obturator hernia, the integuments over which were inflamed and becoming gangrenous. He made an incision; the contents of the tumor escaped; and the patient died next day.§ The accuracy of the diagnosis was verified after death.

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*[*Archiv. f. Phys. Heilkunde*, 1846, § 408.

†Ibid, 1851 § 142.

‡Mr. Hilton, *Med.-Chir. Trans.*, 1848, vol. xxxi. p. 323.

§Gunther's *Lehre v. d. blutigen Operationen*, Abschnitt xv., § 148.

Dr. Heiberg operated upon a woman, fifty years old, after distinctly feeling an elastic swelling in the left adductor region. Upon this tumor he cut down, opened the hernial sac; stretched the obturator canal with his finger, and returned the bowel. The patient, however, died.[*] Mr. Heath, of Newcastle, operated upon a woman seventy-five years old. The tumor, although small, was perceptible; the pain on pressure and down the limb very characteristic. The sac was opened, its orifice cut, and a piece of dark-colored intestine returned. The aged patient survived the operation thirty-six hours, and the commencement of the attack about four days.[†] Dr. Nuttall, of Leicester, being called to a woman, aged seventy-five years, suffering with well-marked indications of strangulated intestine, but without any tumor in the usual site of hernial protrusions, was led, in consequence of pain being produced in that part when he pressed in one particular spot, to diagnosticate an obturator hernia, although there was not even "fulness" perceptible, over the site of the obturator region. He cut over this painful spot, found a small tumor, exposed the hernial sac, and reduced its contents by gentle pressure. This old woman survived thirteen days. After death, the bowel which had been strangulated was found in process of repair. An obturator hernial sac was seen on both sides.[‡]

We have now to describe the cases which have been cured by operation. Mr. Obre seems to have been the first surgeon to cure a case of strangulated obturator hernia. This was in 1851. In a woman, aged fifty-five years, tall and stout, he diagnosticated a strangulated hernia of this kind. He cut down upon the swelling, incised the sac and its orifice slightly, and returned a small piece of blue congested bowel.[§]

In 1853 I assisted Mr. Bransby Cooper in an operation he performed at Guy's Hospital on a woman, forty-nine years old. She was exceedingly emaciated, had given birth to twelve children, and was affected with bronchitis. She was not aware of being ruptured. For sixty-two hours before coming to the hospital she had been suffering with strangulated intestine. Her illness began with a sudden pain at the upper and inner part of the right thigh, and extended from that spot along the inside of the thigh, knee, front of leg, and to the great-toe. Upon examination of the region below Gimbernat's ligament, a deeply seated swelling was felt. Mr. Cooper made an incision over the tumor, divided the pectineus muscle, and reached the hernial sac. Gentle pressure was made upon it, and the contents passed readily into the abdomen. She slowly recovered, and the wound entirely healed; but before she left the hospital she was seized with acute bronchitis, which caused her death.

Dr. Lorinser, in 1857, discovered an obturator hernia by an examination per vaginam. The age of the patient is not stated. On the eleventh day after the commencement of the attack, he cut down upon the tumor, opened the sac, and found the contents in a state of gangrene. A fæcal fistula was established, which subsequently closed, and the woman survived the operation eleven months.

We believe that we have now given a brief but instructive summary of the cases on record from which useful practical lessons may be derived. There are more instances published, which have been discovered after death, and therefore simply attest the fact of the existence of the disease.

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[*] Gunther's *Lehre v. d. blutigen Operationen.*

[†] *Lancet* 1857, vol. ii., p. 109

[‡] *Brit.-Med. Journal*, 1857, p. 566.

[§] *Med.-Chir. Trans*, 1851, vol. xxxiv., p. 233.

[‖] Gunther's *Lehre u. d. blutigen Operationen*, Abschnitt xv., § 147.

Mr. Kingdon believes he has met with five cases of obturator hernia in living persons. Two of them were in men; in both, the femoral artery was in front of the swelling, and pushed forward at each forced expiration. The men were past forty years of age, thin and gaunt. He does not recollect whether the femoral artery was pushed forward in the female, whose case he otherwise well remembers; but he distinctly recollects that he was able to feel the bony rim at the upper edge of the aperture through which he had returned the hernia. The woman was emaciated to the last degree of voluntary locomotion.

We propose next to select the most prominent facts from the whole number of cases, with an especial view to the diagnostication of those cases in which there may not be any palpable or ocular evidence of a rupture.

Diagnostication of an obturator hernia,—from its position. After passing along the obturator canal, it emerges upon the thigh below the horizontal ramus of the pubes, to the inner side of the capsule of the hip-joint; behind, and a little to the inner side of the femoral artery and vein; and to the outer side of the tendon of the adductor longus. The tumor formed by the protrusion is covered by the pectineus muscle. From crural hernia, therefore, it may be distinguished by observing the relative positions of the horizontal ramus of the pubes and of the femoral artery. Those structures occupy, in fact, a position between these two kinds of hernia. In obturator hernia they are in front of the tumor; in crural hernia they are behind it. In the former, then, they are easily felt; in the latter they cannot be without difficuity—not, perhaps, until the hernia be reduced. In those cases in which either a fulness, slight hardness, tumefaction, or swelling exists, coupled with well-marked indications of obstruction or strangulation in some part of the alimentary tube, the difficulty of diagnosis is not so very great; but how much embarrassment arises when those symptoms which betoken strangulated bowel exist, and a tumor is nowhere to be felt, let the numerous cases on record, in which the rupture has only been found after death, attest.

Assuming, for the sake of illustration, that we have before us a patient suffering with well-marked constitutional indications of strangulated bowel, and that, after the most careful examination of all those apertures through which ruptures most commonly escape, we have failed to detect any palpable tumor to assist in explaining them, how are we to discover an obturator protrusion, or obtain sufficient evidence of the probable existence of one to justify an exploration of the obturator region by means of the scalpel? We reply:—By pain during the development of the hernia; by pain at the commencement of the present attack; by pain of a peculiar character during the progress of the illness; by pain referred to the course of the cutaneous filaments of the obturator nerve and the plexus formed with it, and the internal cutaneous and its distributions; by pain excited by certain definite movements of the hip-joint; by pain induced by local pressure carefully applied; and by pain when an examination of the pelvic orifice of the obturator canal is made per vaginam.

We shall now describe these important indications with a little more precision. During the formation of the hernia, some of the patients had suffered at irregular intervals with constipation, nausea, and pain resembling colic in the pelvic region; and one woman related how upon repeated occasions she had suffered thus, and felt relieved directly after experiencing a sensation as if something slipped back into the abdomen at the lower part. In Mr. Hilton's case, some months before the fatal attack from hernia, on the left side, the patient had suffered with symptoms of bowel-obstruction and pain referred to the right side. After death a right obturator hernial sac was found "more distinct than on the the left side, large enough to admit freely the fore-finger."

One patient narrated, in a very striking manner, how she had been suddenly seized with a violent pain at the inner and upper part of the thigh. Soon afterwards, nausea, followed by vomiting and all the other indications of strangulated bowel, existed.

In several of the cases there appears to have been something very characteristic in the nature of the pain. Admitting the difficulty of meeting with any two or more persons who would describe pain so closely resembling each other's sensations as to prove an infallible guide, yet that described during the progress of the illness seems to afford some clue in these cases. It is described as spasmodic contraction of the abdominal muscles, and not as pain within the abdomen. For the explanation of this phenomenon, we may refer to the association existing between the cutaneous filaments of the obturator nerve, which are irritated by the pressure of the tumor in the obturator canal, and the muscular filaments distributed in the abdominal muscles; for all are branches of the lumbar plexus.

The pain described by several patients, in both instances, when a hernial tumor was palpable, as well as when it was entirely concealed, could not have failed to attract the notice of the surgeon to the distribution of the cutaneous filaments of the obturator nerve, and the more internal of the internal cutaneous. In this fact we have a most valuable aid to the diagnosis of some abnormal pressure upon its trunk, as it traverses the obturator canal. Certain definite movements of the hip-joint may subserve very usefully in diagnostication, as, for example, when there may be some doubt on which side the protrusion exists, or when it chances to be so small as to be under the influence of the obturator muscles, when only in a violently contracted state. We may therefore employ the actions of these rotators of the femur outwards, to compress the tumor, and thus excite pain; and by comparing the influence of these muscles on both sides of the pelvis, valuable aid might be obtained. It has been demonstrated after death, that in some cases the protrusion passes between the fibres of the external obturator; and therefore we may suppose that they could readily compress the neck of the tumor. Want of space prevents further detail; we must therefore leave the adoption of this test, and the method of employing it, to the intelligence of the surgeon.

In several cases the effect of local pressure over the external outlet of the obturator canal has been to cause acute pain, and even the detection of slight fulness or hardness when no other sign existed at the site of the protrusion. But even this examination should be made with great discrimination. A careful distinction must be made between pain caused by pressure on the obturator nerve and on a hernial protrusion;

the muscles, especially the pectineus, must be relaxed; and a comparison of the results of the same amount of pressure on the two sides of the body in the same locality should be instituted with proper precautions. The femur should be supported by an assistant in a position of slight flexion, with rotation outwards, and between abduction and adduction.

The pelvic aperture of the obturator canal may be reached from the vagina in the female, and from the rectum in the male. In cases of difficulty and doubt, therefore, some assistance may be gained by taking advantage of the opportunities these passages afford for necessary the examination.

Accuracy in diagnosis being of paramount importance, we cannot conclude this part of the subject without alluding to the great advantage to be derived from carefully comparing the outline of Scarpa's triangle on both sides of the body; and of impressing upon those who may happen to have a case of suspected obturator hernia under examination, the practical value of seriously reflecting upon all the features of the case referable to nervous derangements, as aids to diagnosis in these most perplexing and difficult cases.

Treatment.—Should a hernia be detected, the application of pressure to the tumor may succeed in reducing it. The pressure should be directed in such a manner as to free the hernia from the ramus of the pubes, and pass it underneath it.

Failing to do this, or even with a well-grounded suspicion of hernia, the surgeon should explore the region below Poupart's ligament. The incision through the integuments should be either parallel with the trunk of the femoral artery or with the fibres of the adductor longus muscle. It must be sufficiently far inside the artery to avoid the femoral vein. It may commence a little above Poupart's ligament, at a point midway between the spine of the pubes and the spot where the femoral artery passes over the ramus of that bone. The fascia covering the pectineus muscle being exposed, perhaps the hernial tumor may be felt; and if not, pain on local pressure may incite to a deeper prosecution of the search. This fascia and the pectineus muscle being divided in the line of the original incision, or its fibres being separated with the handle of the scalpel, some fat and the fascia of the obturator muscle are reached. As yet, however, the tumor has not been felt; nevertheless it may still be there, under cover of the fibres of the obturator muscle. These must be separated; for it is not until the finger can be placed upon the outlet of the obturator canal that the search for the hernia should be abandoned as hopeless. Care must be taken to avoid cutting the filaments of the obturator nerve.

How far the surgeon would be justified in making an examination of the opposite side, after having failed to find the hernia on the one first explored, is a proposition we must leave to the judgment of those who may happen to be placed in such an unpleasant dilemma.

We conclude with this observation of Camper: "Forsan frequentiores sunt, quam quidem creditur, in ileo igitur ad omnis generis herniarum possibilitatem necessario attendum est."

Perineal hernia.—The sac of this hernia is formed of the peritoneum, which in the male lies between the prostate gland and rectum, and in the female between the vagina and rectum. In both sexes, when the hernia fills the sac, there is a tumor in the perineum. This kind of hernia is most common in women, and usually consists of a portion of the alimentary canal, of the omentum, or of the urinary bladder.

The sac of a perineal hernia escapes between the anterior fibres of levatores ani, and is covered by the internal abdominal fascia of that region of the pelvis.

The protrusion of the hernia may be prevented by using a T-shaped bandage.

Pudendal hernia.—Pudendal hernia forms a small elastic tumor in the labium pudendi. It lies in the posterior and inferior half of that organ, and forms a somewhat elongated projection at the side of the vagina.

The neck of the sac is placed between the ascending ramus of the ischium on the outside, and the vagina on the inside.

This hernia may be developed at the early age of 22 years (Sir A. Cooper): and in this case it had existed some months.

The tumors in the labium, which may be confused with this hernia, are those formed by inguinal protrusions and collections of fluid. Of the last are cystic formations and hydrocele of the round ligament. These, however, are never reducible; they are not diminished by pressure, and they slowly increase in size from their first appearance.

From inguinal hernia it is distinguished by its position, shape, and relations. It has not passed through the external inguinal ring, but lies parallel with the axis of the vagina. It does not form a pyriform tumor in the labium, but a somewhat rounded mass. It lies by the side of the ramus of the ischium, and not over the body of the pubes.

From crural hernia it is distinguished by the neck of the tumor being placed entirely to the inside of the ramus of the ischium and the muscles attached thereto.

A suitable bandage is required to support the protrusion.

Vaginal hernia.—This hernia is usually developed in women who have borne several children. It is only covered by the peritoneum, and that portion of the walls of the vagina which protrudes. The orifice of the sac is usually large, and readily yields to pressure. Consequently it is easily reduced, and, with the exception of the discomfort and annoyance it causes, it is not attended with urgent symptoms. The rectum and urethra may, however, become so much compressed, that inconvenience, and sometimes suffering, may arise from this cause.

The protrusion requires to be replaced in the pelvis, and the necessary support to maintain it there is afforded by making use of a suitable bandage.

When the urinary bladder forms the rupture, which occasionally happens, great distress arises from a constant desire to micturate. The urine becomes ammoniacal, and the bladder so irritable, that a few drops of urine frequently escape, causing intolerable inconvenience. Attention is therefore required to improve the condition of this secretion, and the rupture must be at the same time supported.

Ischiatic hernia.—This kind of hernia escapes through the ischiatic notch, and forms a tumor beneath the glutæus maximus muscle. The neck of the sac is either above or below the pyriformis muscle, but generally below it. The fundus, at first covered by the glutæus muscle, and lies under the integuments.

When the hernia is in the sac, it forms a tumor of variable size, soft, tense, yielding, reducible on pressure, and causing more or less pain.

Should the hernia become strangulated, and the operator be required to enlarge the mouth of the sac, Sir A. Cooper advises that the incision be carried directly forwards.

JOHN BIRKETT.

New Treatment of Hernia.

In the preceding paragraphs we have given a full account of hernia and all that is known on the subject.

Some eight years ago it was our fortune to have quite a number of cases of reducible hernia to treat, and the great annoyance they gave us induced us to a complete study of all the remedies and all that had been written on the subject, and, as the preceding papers show, no very satisfactory conclusions had been arrived at. We tried pressure with trusses and cured three cases out of the number treated, none of which have ever returned; but our failures to our cures were about ten to one; and we visited several Medical Schools, and, amongst others, the two schools at Nashville, Tennessee. There, in the Shelby Medical College, we saw the use of Wurtzer's operation. Several cases treated in the penitentiary were apparently successful, and we bought from Prof. May his instrument and tried to introduce it into practice.

The first case we tried it in was an entire failure, the instrument, on the third or fourth day, turned upwards and the needle cut downwards, and the intestine protruded beneath. This case was only an ordinary one, and such as we thought suited to the instrument. The hernia was on one side and was oblique, but of twenty years standing. Finding our instrument useless, we began to think of something better. We had seen extracts of Wood's operation but never yet have we been able to understand his procedure further than that he attempted by subcutaneous insertions of sutures to close the internal orifice. This struck us as a good idea; and we also saw, in a lecture of Prof. Stone, of New Orleans, his opinion stated that there would be no plan of operation successful except one to restore the parts to their healthy and natural place; in other words, that the abdominal wall should be pulled back to the place from which it was pressed, and made firm as the other parts; that all invagination must be a failure, the intestine would be pressed down, bringing the plug and invagination before it.

Wurtzer had reported a thousand cases of cure by his instrument, but other surgeons had only a temporary success, and the hernia returned. Such being the case, we began to think how best this *sine qua non* could be fulfilled; so we hit upon this plan: to pass down through the edges of the oblique muscles silver wire, passing it into the peritoneum across the opening into the tendons of the other side, and thus making a suture subcutaneous, and crossing the wire back through the cellular tissue inserting about four lines to the half inch of each tendon, and then pulling them together, entirely closing the orifice without admitting any air to peritoneum to cause inflammation, and using silver and platina wire which will not irritate or produce pustulation. Now, this we proposed to do in the following way:—Take a needle threaded with silver wire, and, having marked out three different lines, or four as we desire, say four as best. We begin by inserting the index finger in the invaginated hernia, and placing it under the tendons, we push the point of the needle down through the part incised, pushing the needle over to opposite side, guiding it with our finger, so as not to enclose omentum or intestine, and pass it out on opposite side about same distance, thus we have placed the wire through the parts designed to be pulled together, then we revert the point through the cellular tissue above the skin and cross the two external ends in the cellular tissues. Thus having placed the wire, we pull it tight up to the folds of the tendons, making pressure, and then tying the two ends over a piece of cork, and let it remain until by pressure it cuts its way out, leaving the two tendons drawn together and a cicatrix where the wire has cut its way out. When the wire becomes loose, take it out and your patient is cured. You may put in two, three, or more of these sutures so as to completely close the opening, and this operation is applicable to all external herniæ, whatever their shape or position. Having, in 1859, come to this conclusion, on the 11th day of Sept., in presence of Drs. Porter, Weens, and Burke, we endeavored to operate on Abram—a negro man—with a common surgeon's needle. Having shaved the parts and layed out four lines with ink, about three lines apart, immediately over the internal and external ring, running down obliquely to the pubic, or rather on the course and side of the illeo-pubic ligament (Poupart's), then putting our patient under chloroform, we turn the needle and pass it down as above described from the outer line through to the peritoneum, crossing as before described, and passing to opposite outer line, thus having passed the needle through both tendons and having the open ends on the external surface. Now we again threaded our needle, passed from outer line down to external side of tendons and then across to third line on other side and out on surface. Then we threaded the other end and passed it down and out on the opposite side as before. Now we had the parts enclosed that we wished and so we pulled them together and tied them through a plate of lead, with holes to keep them from slipping down or upwards or right or left. We put two threads in this way and tied them over the lead plate.

We had great difficulty in passing the needle through the first part, as it was not long enough and did not give us leverage power enough to pass the needle straight, nor could we enclose enough of the tendons, and in our pressure and attempts we bent the wire and misplaced the parts so they did not come well together; again, we had great trouble in passing back the wire on itself, so it was bent at right angles and gave us great trouble to pull it through, but when we had so done it looked well and smooth.

We kept the wires in fifteen days, they producing no particular irritation, patient not having any fever or any soreness of peritoneal cavity. On the 15th we took out the sutures and let our patient go. He went out during the first day and sat on the bank of the Brazos river and evacuated his bowels, and while straining he felt something give way and it produced severe pain. He came to my office, holding his hand over the old rupture. I put him to bed, and the next day there was a protrusion, and finally the hernia was as large as ever.

We now sent our patient home, and sent to Messrs. Tiemann & Co., of New York, a draft of a needle with two points and an eye in the the centre, and also a pattern of a bivave hernia instrument, made to separate by a screw when inserted into the vaginal process of the reduced hernia, and made to dilate by a screw so as to completely fill the opening. Then the external plate of Wurtzer was screwed down on the external surface holding the plates in position. Through this external plate there were two other holes passing to the external valve of internal portion and through this to the internal where there was a nut-screw. Then with a trochar we push down through that part to this nut screw; taking out trochar we insert little rivet screws and screw the parts together. This being done, we put in another screw as high up as possible in the same way.

Now, we claim for this instrument these improvements on Wurtzer's instrument:—

First—The bills or valves of the instrument can be expanded so as to completely fill the opening.

Secondly—The screws go perpendicular through the invaginated parts, and will not cut out so easily nor be so loose as in Wurtzer's needle, and, besides, you can put in as many screws as you desire to pull the parts as close together as necessary.

Thirdly—The screws are not in the way, nor the handle of the needle as in Wurtzer's.

But I then held, and still hold, that all invaginating procedures will generally fail, and are alone adapted to internal oblique herniæ; are not adapted to any others whatever, even direct inguinal hernia.

So I took the needles sent me by Messrs. Tiemann & Co. (which were only three inches in length and the eye directly through the centre and without canular surfaces on each side), to operate on my next case, which was a negro man, blacksmith, of thirty years, the property of Mr. Thomas Drayton, of Oyster Creek, Brazoria county, Texas.

I operated in the following way:—

Taking one point of the needle in my hand, I pushed up the skin and cellular tissue above the protrusion and then inserted the other point in second line as shown in diagram (F), passing it out on four. Then I pressed the outer end down through the tendons into peritoneum, guided by the index finger of my left hand, but I found as before my needle was too short, and I had to pull it out and use the common surgeon needle as before, and did but badly succeed in putting in the wires, which were tied over a piece of cork and left in place for some weeks, but as soon as they were taken out the protrusion returned, but not so large, as he now could keep it up with a truss, which was difficult to do before. This case was a bad one of direct inguinal hernia, and did not admit of any other procedure recommended in any of the above recited essays. I saw Mr. Drayton on the 20th of Nov., 1866, and he told me that the boy was now as bad as ever.

While this case was under treatment, I had a negro child brought to me for treatment, and I used my double spier-pointed needle in his case—the needles being long enough to reach across the internal opening.

This child was the property of Mrs. Ellen Kyle, and the operation was performed in the the presence of Dr. Samuel A. Tousey (now of of this city) and Dr. Oliver, then of Sandy Point, Oyster Creek. I put in only one suture, pulling the parts well together until it cut itself out on the 26th of October, 1862, which was in thirty days. The cure was perfect and remains so up to the present time.

Finding much trouble in pulling the nedles through in this instance, and finding also the needle two short even for a child, I delayed and refused to operate until I got longer and better constructed needles, which I did not have a chance to do, owing to our late war, as there are no instrument makers in this State. This last summer I visited Messrs. Tiemann & Co., and had them make me some needles six inches long and a segment of a curve, with a canulated eye, and I had electrotypes made of it, and diagrams made of the procedure, and permitted them to be inserted in the New York "Medical Record," of Sept. 15, 1866, before they were sent out to me. I used the needles on the dead subject with ease and facility, but did not have an opportunity of trying them on the living, before they were stolen a few weeks since, with all the electrotypes, during the fire that consumed our office on the 9th of this month. We were keeping them for the conclusion of this article and regret their loss very much, but have ordered them to be duplicated, and when we receive them this article will be *continued.*

* * *

Death from Asiatic Cholera.

U. S. STEAMER TALLAPOOSA,
Off Galveston, Texas, December 15, 1866.

EDITOR GALVESTON MEDICAL JOURNAL:

The following case of Asiatic cholera occurred on board, Nov. 30th, 1866:

JOHN McL———, aged 28, second-class fireman, was discovered by my steward lying upon the upper deck, groaning and in great pain. I was immediately called to him (11, P.M.), and found him in a state of collapse—pulseless; extremities cold; skin of a dull leaden hue and covered with a profuse perspiration; countenance pinched and anxious; eyes sunken; urine suppressed; hands shriveled; tongue cold; cramps in legs, and rice-water evacuations; no vomiting. I immediately endeavored to restore warmth to the extremities, control the evacuations, and arrest the downward tendency.

All the means which I could bring to bear proved useless; no signs of reaction. He sank and died on the following morning, seven hours after the attack. After his death I learned that he had had a premonitory diarrhœa, some three days previous to the attack, which caused his death.

L. TRAVER,
Surgeon U. S. Navy.

Practical Observations in Ophthalmology.

BY E. WILLIAMS, M. D., OF CINCINNATI, OHIO.

In volunteering a paper for the consideration of this Association, I have tried to make it, as far as possible, of a practical character, embodying mainly my individual experience. By introducing different topics, also, I have hoped to excite a more general interest among those members specially, if not exclusively, occupied in ophthalmic practice.

STRICTURE OF THE NASAL DUCT.

Only a few years ago, ophthalmic surgeons were not only dissatisfied, but almost disgusted with all the then known methods of treating dacryo-cystitis and stricture of the nasal duct. It was at this period that Desmarres revived the old method of obliterating the lachrymal sac. His results, and those of others after him, were brilliant compared with the almost uniform failures of the numberless devices of his predecessors for restoring the natural passages by dilatation. As a disciple of Desmarres, I was, for a number of years, a zealous advocate of occlusion of the sac by cauterization with the ferrum candens or the chloride of zinc. For mild cases, however, this treatment was too severe, and attended occasionally by serious accidents; while other methods were deplorably inadequate. In the midst of this general longing for something better, the genius of Bowman struck out a new path which has led eventually to most gratifying results. In harmony with the spirit of modern surgery, he persisted in the conservative efforts to remedy and restore, rather than destroy. He originated, and first put in practice, the simple and happy idea of gaining free access to the sac and nasal duct by splitting the canaliculus.

His plan of operating and system of stiles are so well known that I need not detail them here. Suffice it to say, that it opened up a new channel, and created a new era in the history of diseases of the lachrymal passages.

Bowman's treatment was beneficial in most instances, and successful in many; but relapses in a few months or years after the cessation of the use of the stiles were frequent. I believe, with others, that these failures to produce permanent relief were due to the insufficient size of the stiles and inefficient medication. It is, I believe, an established fact that stricture of the urethra is much less likely to relapse, if the dilatation is carried to the *utmost capacity* of the canal. In my judgment, the same is true of the nasal duct.

Dr. A. Weber, in the *Archiv fur Ophthalmologie* (1861), reviews the whole subject of treatment by Bowman's plan; gives a summary of the results really attainable by it; its short-comings, in many cases, the reasons of this, and his own modifications of the method. He deviates from Bowman in three important particulars. First, he enters the sac by laying open the superior instead of the inferior canaliculus. Secondly, he uses much larger instruments for dilating the stricture. Thirdly, he substitutes gum-elastic and wax bougies for the metallic. Finding that such large instruments could not be easily introduced by simply slitting up the canaliculus, he at the same time incises the sac and the *ligamentum mediale*, subcutaneously. For this purpose, he devised a delicate probe-pointed knife, curved upon the back, which can be readily passed through the puncture. The operation is performed as follows: The little knife is made to traverse the punctum and canal, till the probe point enters the sac, the upper lid being made tense by drawing it upwards and outwards, against the edge of the orbit. The handle is then depressed till the canaliculus is divided down to the sac. Then the knife is pushed further down into the sac by raising the handle towards the glabella, and turned so that the cutting edge presents forwards and outwards. Then, by pressing the skin at the inner canthus with the index finger of the left hand against the edge of the instrument, and making a little sawing motion, the sac is incised and the internal palpebral ligament partly divided subcutaneously. Both for slitting the canal and notching the sac, this knife is, by all odds, the best instrument I have ever used.

For exploring the sac and duct, thus freely opened from the conjunctival surface, Dr. Weber uses graduated conical silver probes. They are made double, like Bowman's stiles, one end smaller and the other larger. The small one begins with a bulb, after which it increases in thickness till, at the distance of an inch and one-eighth from the point, it reaches one line. The other commences with Bowman,s No. 6, and increases to the size of the eighth of an inch. With the smaller of these he enters the sac, and makes his exploration, ascertaining the situation and character of the stricture. If the stricture is membranous and elastic, he lays aside the silver explorer and uses the small elastic bougies, somewhat conical at the point. After a few days, a larger one may be passed through the stricture, and so on up to No. 9 or even No. 10 of the urethral bougie scale, finishing the treatment with wax bougies in the course of three or four weeks. Should he find the stricture narrow and callous, or complete atresia, he then, after injections for a few days with tepid water, forces the obstruction with the silver probe and dilates it at once to the size of Bowman's No. 6, by pushing the conical probe through it. Afterwards he finishes the dilatation with the elastic bougies as before. He thus dilates the duct to its utmost normal capacity. He introduces the bougie for a short time every day as advised by Bowman.

As topical applications, on which Weber justly lays great stress, a solution of zinci sulph., cupri sulph., or plumbi acetat. is daily injected after the cavity is washed out with tepid water. Where there is abundant purulent secretion, he uses a solution of sulphate of copper of ten to twenty grains to the ounce.

After a faithful trial, first of Bowman's and afterwards of Weber's method, I have adopted a combination of the two, with certain modifications of my own. My results for the past two years have been so uniformly successful, that I venture to give it publicity, so that it may be fairly tested by others.

I follow Weber in choosing the upper canaliculus, and practise the opening of the sac essentially as he directs. I then enter with the large one of his conical silver probes, search for the stricture, and pass it, easily if I can, forcibly if I must. If I find that the obstruction yield at all easily, I push the instrument clear down to the nose, thus dilating it almost or quite to the full capacity of the nasal duct at the first sitting. Bleeding from the nose after its withdrawal generally occurs, and sometimes it will be quite profuse. Should the stricture prove to be firm and rigid, I force it with Bowman's No. 5 or No. 6, leave it in a few minutes, and have the patient return next day, when, if not too painful, it is passed again and left in half an hour or more. In the course of four or five days, usually, the stile can be worn all the time. For about the first week, I wash out the sac with tepid water daily after removing the stile, the water, of course passing freely into the nose. The best syringe for this purpose is the small gutta percha, bent at a right angle about half an inch from the point. My object is to get the patient to wearing the *stile* as soon as it can be tolerated, instead of only introducing it for half an hour or so each day, as practised by Bowman, Weber, and others. Most patients will be able to do so in from four days to one week; while a few very irritable subjects must be coaxed along for two weeks before they can bear it day and night.

For wearing, I have had a series of five silver stiles made by Mr. Wocher, of Cincinnati. The smallest, with which I always commence, is marked No. 5, and is in size larger than Bowman's No. 6. They are marked 5, 6, 7, 8, 9, and correspond in size to the same numbers of the bougie scale. No. 5 has a diameter of one-sixteenth and No. 9 one-eighth of an inch. Where Bowman *leaves off* the dilatation I *begin*, and go up to the full capacity of the duct, which is usually about 9. After letting the patient wear No. 5 two or three days it becomes loose, so that the next larger can be substituted, and so on up to number 9, which is usually attainable in from two to four weeks. The stiles are from 1¾ to 2 inches long, slightly conical at one end, and flattened at the other, and gently curved. They should be long enough so that when passed down to the floor of the nostril, the flat end will extend about ¼ inch above the inner canthus and rest on the skin of the upper lid. The upper flattened end can be bent forward a little, or in any other direction to make it comfortable. In fact, I now bend them very much down, just where they enter the sac, so that the flat end hooks down over the lower lid and rests on the skin below the inner canthus, the curve thus coming between the puncta, and all traction and inconvenience avoided. The smaller numbers, especially, if not bent sufficiently, are liable to work down and disappear in the sac. This has occurred to me twice, and gave me some trouble and anxiety. In one man, my No. 5 worked down and was *swallowed* during sleep. I charged him to keep a sharp look-out for it, and just four days afterwards, with a little obstetrical assistance, it passed his bowels.

During the whole treatment, the stile is taken out daily, the sac first washed out well with tepid water, and then injected with a solution of twenty grains to the ounce of sulphate of copper. The length of time the patient is made to wear No. 9, after it is reached, depends upon the amount of secretion and the dilatation of the sac. As long as there is any perceptible discharge of mucus from the lining of the sac, the stile and injections should be continued, the latter being made less frequent, or weaker as the case improves. It is astonishing to see how rapidly the blennorrhœa and enlargement of the sac disappear under this treatment. In most of my cases, I have finished the treatment and abandoned the use of the stiles in about six weeks. Some are obliged to wear them longer. The great advantages, as I conceive, and have found from actual experience, in my method of causing the patient to wear the stile constantly are, that patients suffer much less, get well quicker and better when it is only introduced for a short time each day. I am now having gutta-percha stiles, of the same model and sizes, made by Tiemann, of New York. I think they will be an improvement on the silver ones, because of their great elasticity and lightness.

Recently Mr. Critchett, in his lectures on this subject, recommended stiles of the *laminaria digitata* or *sea tangle* for dilating strictures of the nasal duct. When dry, the stem of this sea-weed is smooth, elastic and possessed of the admirable property of expanding rapidly when moistened. Mr. Critchett has four sizes made, of the common length of ten centimetres, and varying in diameter from 1.2 to 2 millimetres. The important point in the use of these, is to judiciously control the dilating power which we possess in that substance. If such a stile was passed tightly through a stricture and left twenty or thirty minutes, it would be impossible to extract it without doing violence, in consequence of the expansion below the stricture. Of course they must be made sufficiently small and not left in too long. In the *Klinische Monatsblatter fur Augenheilkunde* for March and April, 1865, there is an article from Dr. Weber, in which he sets forth the advantages of the stiles of laminaria digitata, and he says he has now abandoned the use of gum and wax bougies, in their favor. He has constructed five stiles embracing the two extremes of Critchett. Besides these, he uses conical ones for certain cases. He finds by experiments that when immersed in *warm* water, they expand to nearly double their diameter in from ten to thirty minutes, according to the size. Dr. Jaesche, of St. Petersburg (A. f. O., vol. 10, 2d part), has lately suggested cutting the sac *directly downwards*, after slitting up the lower canaliculus, as less painful than the method of Weber. For myself, I do not see how this procedure is any less severe, and it is open to serious objections. He likewise recommonds the division of narrow strictures by a stricture knife, and perforation of atresia by the same means. Weber also grefers this to forcing the obstruction, and thinks there is much less danger of making a false route when the knife is used. For my own part, I believe just the reverse is true, if the stricture is forced by a large stile, such as No. 6, which filling up the nasal duct cannot readily deviate to either side, and pass under the mucous lining. Since I have used large stiles for forcing obstructions, I have had no difficulty from false passages.

As to the stiles of sea tangle, I have not yet used them and do not see much necessity for their action. For producing sufficient dilatation to allow the patient to wear silver or gutta-percha stiles, instead of forcing and dilating at once with a metallic or other probe, they may be useful. I shall give them a fair trial, and hope they may be found an improvement. For the whole treatment of my method of wearing stiles constantly, this substance is not at all applicable, on account of the long-continued and, towards the last, very irregular expansion.

Quite lately I have seen in the *Annales d'Oculistique*, a review of a pamphlet recently published by Manfredi, in which he elaborates the alleged discovery of Sperino of Turin, that the *surest way* to *re-establish* the *permeability* of the lachrymal passages is to *obliterate the sac!* In plain English, the best way to *open a* hole is to *stop it!* If tear sacs, and nasal ducts, and strictures are got up in Italy differently from what they are here, that remarkable suggestion may embody the entire philosophy of their therapeutics. Where the suppuration does not rapidly subside after the stricture is opened and injections used for a few days; Weber recommends artificial ectropium of the lower punctum by the use of collodium, or of a ligature opposite the punctum as it is used for the relief of the entropium. This prevents the tears from entering the sac and keeping up the irritation. In the normal position of the lids, the tears are mainly absorbed by the lower punctum. Those who wish to study this subject more particularly, I would refer to the sources above indicated, and to the *Cincinnati Lancet and Observer* of November, 1864, and June, 1865.

PARACENTESIS CORNEÆ.

This little operation is a most valuable means not only of relieving pain, but very often of rescuing vision when in imminent peril. A broad, very sharp needle with a small probe on the opposite end of the handle is the best instrument for the purpose. Desmarres' paracentesis needle is to broad, difficult to introduce, and more painful. I have, therefore, abandoned its use.

The operation is performed as follows: The lids being held well and firmly open, and the eye supported on the inner side with the fingers of the operator, so as to prevent its rotation inwards as much as possible, the needle is passed through the cornea at the outer side about a line from its margin and parallel with the plane of the iris. When the point has fairly entered the aqueous chamber, as indicated by its increased clearness, the handle may be depressed towards the temple and the needle gently withdrawn, so that the acqueous humor may not escape too suddenly and bring the iris and lens against the point. The better way, however, is to suddenly withdraw the needle by a little jerk. In this way little or no fluid escapes till the wound is made to gape by pressing upon its external lip with the end of the probe. As the humor trickles out, the iris, supported by the lens, advances till it comes in contact with the cornea.

The most pain is felt just as the evacuation of the chamber is completed. Although, with me, this little operation is of daily occurrence, and has been for years, I have never met with any serious accident from it. I always make slight pressure upon the closed eye with charpie or a compress, immediately after the evacuation, to prevent hemorrhage into the interior chamber from the sudden cessation of the natural tension. If this does take place, the blood is soon reabsorbed, and nothing serious results. I seldom find it necessary to fix the eye with the forceps during the puncture, or to give chloroform except in children.

The two classes of cases in which I have found paracentesis an invaluable remedy, are those of ulceration of the cornea with or without hypopium, attended by great pain; and of iritis or iridocyclitis. There is nothing that will so certainly stop the progress of an ulcer of the cornea towards perforation on the one hand, and lateral destruction of the tissue on the other, as the relief of tension by a puncture. The pain, which is often most intense, is relieved in a very few minutes, and the ulcer begins to heal. The peculiar action of atropine, and its curative effects, are also very much favored by the operation. In all cases of corneitis with ulceration, attended by hypopium, or by severe pain that does not promptly yield to the the topical use of atropine, I resort to paracentesis. It always relieves the suffering promptly, and does vastly more, in my judgment to rescue the eye than any other single remedy. I repeat it once or twice a day, as often as the extreme tension of the eye and the pain, with increase of hypopium are reproduced. I treated a lady recently who had a deep sloughing ulcer near the superior margin of the cornea, extending about one-fourth of the way round. The anterior chamber was nearly half full of pus, and the woman had had no refreshing sleep for more than a week on account of extreme pain. The eyelids were granulated and swollen, and there was every reason to believe the eye would be lost. The patient's other eye was totally blind from chronic glaucoma. In her case, I made a paracentesis every day for two weeks, and sometimes twice a day. For some hours, and usually for nearly a whole day after each puncture, the suffering was relieved, the pus partially disappeared, and the progress of the ulcerative process was checked. As soon as they began to revive, I operated again, and so on until the disease was mastered, perforation of the cornea prevented, and the woman rescued from impending blindness. Of course I used atropine very energetically, and gave the patient anodynes and other treatment internally; but evacuation of the aqueous humor was the only thing that exercised any manifest control over the progress of the disease. So immediate and palpable was the relief after each operation, that the woman would send word at once, when the eye began to pain her anew, for me to come and repeat the paracentesis. In cases of phlyctenular keratitis, so common in children, with ulceration and hypopium, where the active local use of sulphate of atropia in the eye, and mild purgation followed by free doses of quinine internally, do not check the increase of the ulcer and diminish the amount of pus in the anterior chamber, I do not remember ever to have failed to produce a decided improvement by one or more punctures of the cornea. Even if it does not prevent perforation, which it nearly always does when resorted to early and frequently enough, it diminishes the extent of the destruction of the cornea, and leaves enough of it clear, to admit of the formation of an artificial pupil afterwards if necessary. Of course where the ulcer has nearly perforated, great care should be taken to avoid causing a sudden rupture and prolapsus of the iris by too much pressure on the globe during the operation. As a rule, puncturing the cornea in the thinned bottom of the ulcer itself should be avoided, on account of the risk of a too sudden escape of the humor. For several years past I have been in the habit of making paracenteses with most gratifying effects, in obstinate or very severe forms of iritis. If free local depletion by leeches applied to the side of the nose opposite the inner canthus, and the energetic use of atropine—four grains of the sulphate of atropia to the ounce of water dropped into the eye every two or three hours—do not decidedly improve the symptoms in one or two days, I evacuate the aqueous humor. Almost without exception, the disease is checked by the first puncture, as is indicated by the more marked dilitation of the pupil, cessation or great amelioration of the circumorbital pains, increased clearness of the aqueous humor, and diminution of the redness of the globe. If these return in twenty-four or forty-eight hours, I repeat the paracentesis. It is seldom necessary to operate more than twice, and once often suffices to check the severity of the inflammation and bring it under the control of the other remedies mentioned above. In my hands it has proved the best antiphlogistic I have ever tried in such cases. I remember very particularly a soldier whom I treated for acute syphilitic iritis in the Marine Hospital. In the very incipiency of the attack, I had leeches used, and resorted to frequent instillations of a solution of atropine. On the evening of the same day, the pain being excessive, I gave him half a grain of morphine with two grains of calomel, and repeated it in four hours. The next morning, thirty-six hours from the commencement of the attack, I found he had not slept for the pain; there was extensive chemosis; intense pericorneal injection, and so much exudation of lymph from the iris that the whole anterior chamber seemed filled with it. The pupil was very smoky, and the patient could scarcely discern the hand before him. I made a paracentesis at once. As the point of the needle entered the anterior chamber it carried the tough lymph before it, detaching it from the iris, causing the latter and the pupil, as I pushed the needle still farther, to appear in their natural color. After withdrawing the instrument and producing complete evacuation of the aqueous humor by pressure with the probe, nothing was used but the atropine. During the day he got a good sleep, and in the evening all the symptoms were much better. That night he rested well. On the next morning the pain recommenced, but was not so severe. I repeated the puncture with prompt and complete relief, and in ten days time all the lymph was absorbed; the pupil largely dilated and free from adhesions, and the sclerotic again white and natural. The eye recovered perfectly and permanently. A similar case occurred to me since, after a needle operation for secondary cataract. A shred of the lacerated membrane came in contact with the margin of the pupil and caused an inflammation which spread rapidly to the whole iris. Great pain, intense injection, and enormous exudation of lymph came on in twenty-four hours, in spite of free leeching, atropine, and large doses of morphine. I punctured the cornea, when the same detachment of lymph, as it was engaged, and carried across the chamber by the point of the needle, was observed. Decided amelioration was effected, but in twenty-four hours the pain returned with another increase of the smokiness of the aqueous humor. The operation was repeated daily for five days, and the inflammation rapidly disappeared, the lymph was absorbed, and the pupil again became clear as it was just after the operation. I speak particularly of these two cases because of their extreme violence and their ready control by paracentesis after the most heroic leeching and application of atropia had failed to modify the inflammation in the least degree. In iritis, with hypopium, paracentesis is still more urgently indicated. In the obstinate chronic forms, with extensive synechia posterior, repeated evacuation of the aqueous humor will generally relieve the inflammation; but to prevent relapses and effect a permanent cure, iridectomy, according to Graefe's recommendation, is by far preferable.

In cyclitis (inflammation of the corpus ciliare), either acute or chronic, I have also frequently resorted to oft-repeated paracenteses with very satisfactory results. The first case of the kind was that of a young woman whom I treated, some eight or nine years ago, for chronic cyclitis. After having been for some two months, under the local use of atropine, with tonics and alteratives of all sorts internally, I commenced puncturing the cornea, and quit everything else. At first it it was done every day, then every second, and finally every third day, as the case improved. She was so sensitive that I was obliged to put her under chloroform each time, and I evacuated the humor in all nine teen times. The eye recovered, and is well to this day.

Since that time, I have treated several milder cases and one more severe of the same kind, with the same good results. In chronic iritis and in cyclitis, hemorrhage into the anterior chamber after the evacuation is more likely to take place, and immediate pressure to prevent it is necessary.

As to paracentesis in glaucoma, sclerotico-chroiditis posterior with myopia, retinitis, choroiditis, or incipient cataract, I think it should be discouraged. Glaucoma is not amenable to anything but thorough iridectomy. The posterior staphyloma of myopia will not yield to it. Besides, in this affection destructive hemorrhage into the retina, or vitreous humor, is very liable to supervene just after the operation. In chroiditis and retinitis its use is of doubtful propriety; while the curability of incipient cataract by paracentesis repeated hundreds of times, is not admitted except by the zealous Italian Sperino, who recommended it. It is mainly, if not exclusively, in the diseases I have mentioned, that paracentesis corneæ should take, as I think, high rank.

THE UNGUENTUM CITRINUM RUBRUM, OR BROWN CITRINE OINTMENT.

This preparation is not found in the U. S. Pharmacopœia. I have had it made from a receipt found in an old edition of Wilde on the ear. He advises its use in chronic inflammation of the lining membrane of the external meatus. For some eight years I have been in the habit of prescribing it, to the exclusion of all other mercurial salves, for blepharitis marginalis and for phlyctenular conjunctivitis and keratitis. It is very soft, adhesive, melts quickly by the natural warmth of the eye, produces little or no irritation when used on the diseased lids, or in the eye, and acts most admirably in this class of cases, especially after the acute symptoms have begun to subside. I have it applied in the pure state once a day; if to the lids, at night. In the eruptions about the nostrils, behind the ears, and on the scalp, so common in scrofulous children, and generally complicating the phlyctenular inflammation of the eyes, or blepharitis marginalis, or both, there is nothing that acts like it. By the thorough and daily use of warm water and soap, to soften and remove the scabs from the head, the hair of course being cut short, followed by the free use of this salve applied and confined by a night-cap, I have cured a number of most inveterate cases of favus and other scabby formations on the scalp.

It is, in my experience, a very valuable preparation, especially in the class of diseases I have mentioned. It is prepared very much in the same way as the common citrine ointment, except that cod-liver oil is substituted for the neat's-foot oil used in that process. I have heretofore published in the *Lancet and Observer*, the method of preparation, and the special advantages which it possesses over other mercurial unguents. It is admirably prepared by Prof. E. L. Wayne, northwest corner of 4th and Vine streets, Cincinnati. I herewith present a specimen of this salve, as also of the amylum-glycerine paste, containing a grain each of the sulphate of morphia and the sulphate of copper to the drachm of the vehicle. I vary the strength of the copper from one to fifteen grains to the drachm in the treatment of granulated eyelids, and other forms of conjunctivitis. It is a very convenient and a very valuable combination.

Molluscum Contagiosum.

This disease of the skin has been epidemic in Galveston for some time. We never saw a case of it before this year, and have looked over all the works we have, and we quote from all and give a translation from the "Medecine Chirurgisische Encyklopœdie." We also have a plate showing the disease from the publications of the Sidenham Society (Hebra on skin diseases). Da Costa, in his Medical Diagnosis, thus speaks of it: [It] "Has at the top or sides of each tubercle a small orifice, from which a creamy, fatty fluid can be pressed. This variety [of tuberculum molluscum] is regarded as contagious; though there are many who still doubt the contagious nature of 'molluscum contagiosum.'" Bennett speaks of the contents of the cysts as of "a white or slightly yellow color, sometimes fluid, at others semi-solid." The genera of the class tubercular is thus described:—"Pedenculated, globules or fatty tubercles, accompanied by no erythima or increased sensibility, occurring in groups. They are filled with atheromatous matter. Wilson, in his work on skin diseases, describes it.

Neligan classes it as the "Acute molluscum" (Plate xi., fig. 5) agreeing in all respects, with the form which is generally regarded as being contagious:—"It occurs usually on the face and neck of children, and from them it is conveyed to adults, almost invariably, however, of the same family. It is developed at first in the form of minute papulæ, scarcely noticeable, and unattended with any local symptoms; these gradually increase, until, in from six weeks to two months, they attain the size of a small currant, which they resemble much in shape, being somewhat pellucid, and sessil on the portion of integument from which they grow. Their duration is seldom prolonged for more than six months, but their progress is often more speedy, terminating either by ulceration, which first commences at the apex, an opening being there formed through which the altered sebaceous matter contained in them is discharged, when the small tumors collapse and shrink away, or by attack of local inflammation, when they slough off, leaving a pit like that resulting from smallpox. In most cases the molluscous growths are developed in successive crops.

* * * * * * * * * * * *

"*Treatment.*—Internal remedies do not appear to have any effect over molluscum, and are not therefore required in its treatment, except such as may be calculated to restore a healthy condition of the system generally, should it be deranged.

"In the acute form, the employment of a slightly stimulating lotion, as of sulphate of zinc or sulphate of iron, the grains of either to an ounce of distilled water and a drachm of rectified spirit, hastens the throwing off of the small tumors.

"MOLLUSCUM.

"We call those even-colored tumors of the skin, that have an internal orifice, (Gang.,) through which the adipose matter of the skin is changed either in quantity or quality. For this reason we consider these tumors, whether of the size of a pea or of a man's fist, as brought about by the closing of the mouths, or openings, of the oil glands. Their peculiarity consists in the simultaneous appearance of great numbers of those rings. This rare cutaneous offection befalls children at least twice as often as adults, especially those of a scrofulous diathesis.

"The dough-like knot of the molluscum has usually one external orifice even if not perceptible with the unaided eye, through which a milky fluid can be pressed. This in itself will usually diminish the tumor in size, and cause it gradually to disappear."

I was taken with this disease, in New York, in June last; first a little pimple sore on my arm, like those described above, and a little matter of a whitish-fatty character was squeezed out, and I paid it no particular attention; but it continued to harden, and occasionally itch, and I would pull off the scab, and another would form; so it continued for one month, when it broke out, first on my fingers, then over my head and forehead; finally a few on my body, and, lastly, on my feet. When the first one broke on my arm, I did not apply any remedy; but when it broke out on my hands, and other parts of my body, I treated them with chloride of zink, and all that had this whitish-fatty matter, or had an abraded purpose, readily healed up; but on my forehead, and my hands and feet, this matter did not become fluid enough to be pressed out, but dried between the derma and epidermis, and, when completely dred, I could pick out a dried, cheesy, corneous substance, leaving a pit in the derma beneath.

The tubercles are now entirely gone, but have left pits in my hands, and red spots, like small pox, on my forehead, which I have touched with hydr. chl. corrosive and quæ. colcis. with some relief.

I have taken iodide of potash and syrup of sarsaparilla for two months, and cannot say it has done me any good; but the application of the chloride of zink has cured up the sores in a few days. My health was very bad at the time I was taken; having just recovered from a severe spell of cerebro-spinal meningitis. I have seen many cases of it in children since my return, and have been informed that it was quite prevalent during my absence. Dr. Tousy has had a similar attack to myself, and says he caught it from me; and a merchant, (friend of mine,) has had it also, and thinks he got it from me; but it has been in all parts of the city, and doubtless is contagious to a limited extent. I saw three children with it, at the same time, in one house. I have heard all the principal physicians say they have had cases, and only used very simple means of treatment. Dr. Tousy says he washed the parts with castile soap, and applied glycerin to the hard tomors, and took sarsaparilla and iodide of potash. Others say they only used alkalis, such as carbonate of potash, bi. carbonate of soda, and washed with lime water, and their patients recovered in a short time. One thing I am certain of, *it is new here*, and I have never seen a case before the present time (October 30th). There are at present but few cases, though I am far from being well myself.

List of Physicians in the State of Texas.

Those physicians whose names are not correctly reported will please inform us that we may correct them and such counties as are not represented; we will be pleased to receive lists from any one, especially a physician, stating whether graduate or not, and whether regular or homeophatic, eclectic, or hydropathic.

Alexander, A.Thompson. Dr.,Austin, Travis co.
Alexander. Girard, Dr. Wharton, Wharton co.
Antony. Milton, Dr., Columbia Brazoria co.
Ashcomb, Dr. Sandy Point, Brazoria co.
Alexander, E. S. Richmond, Fort Bend co.
Anderson, R., Fairfield, Freestone co.
Adams, R. A., Fairfield, Freestone co.
Allen, N. N. Prof., Galveston, Galveston co.
Angel, James, Dr., “ “
Aschoff, H. L., “ “
Adair, W. W., Randolph, Houston co.
Anderson, C. L., Orange, Orange co.
Adams, S. P., Mount Pleasant, Titus co.
Adams, Dr., “ “ “
Addison, Dr. Pine Tree, Upsher co.
Adams, Jas. G., Centre, Van Zant co.
Alexander, W., Wharton, Wharton co.
Adkins, W. S. Osage, Colorado co.
Browning, S. W. Homer, Angelina co.
Bradnax, Hampstead, Austin co.
Bell. J. G., Bellville, “
Bell, W. T., Sandy Point, Brazoria co.
Beall, E. I., Boonsville, Brazos co.
Baily, F., Millican, Brazos co.
Byers, F. A., “ “
Burke, Dr., Port Lavacca, Calhoun co.
Bomar Dr., Gainsville, Cook co.
Baily, “ “ “
Bolen, “ Fraelsburg, Colorado co.
Bruce, “ Eagle Lake, “
Bowers,“ Columbus “
Banks “ “ “
Ball, “ Boston, Bowie co.
Byars, W. M., Columbus, Colorado co.
Buchell, Dr. Clinton, Dallas co.
Bell, B. W., Richmond, Freestone co.
Brown, J. P., Lagrange, Fayette co.
Baird, T C., Surgeon, Galveston, Galveston co.
Borring, Dr., “ “
Baker, J. M., Plantersville, Grimes co.
Brown, Dr., Anderson, “
Breckinridge, R. I., Houston. Harris co.
Barry, A. R, Hillsborough, Hill co.
Black, I. S., Cedar Grove, Kauffman co.
Bristow, E., Sweet Home, Lavacca co.
Bennett, M. B., Hallettsville, Lavacca co.
Burke, Summerville, Lavacca, Lavacca co.
Brown, P. Duff, Boxville, “
Boggs, W. D. Leona, Leon co.
Brashear, N., Liberty, Liberty co.
Brown, H. W., Waco, McClellan co.
Booth, C. S. “ “
Brigere, Dr., Cameron, Milan co.
Brown, Robt. B., Easton, Penn.
Baker, Dr., Cold Spring, Polk co.
Butler, G. H., “ “
Barton, Dr., Wheelock, Robertson co.
Blair, “ Henderson, Rusk co.
Burts, W. P , Fort Worth, Tarrant co.
Bradfield, Dr., Dangerfield, Titus co.
Brown, A., Gray Rock, “
Boyce, Dr., “ “
Beal “ Wheatville, “
Barnes, “ Mount Pleasant “
Baker, S. W., Austin, Travis co.
Boem, W., Webbersville, “
Beall, Dr., Lunatic Asylum, Austin, Travis co.
Boardman, T. M., Austin, Travis co.
Bigg, Dr., Pittsburg, Upshur co.
Baker, A. M., Huntsville, Warker co.
Branch, J., “ “
Bolton, J. T., Wharton, Wharton co.
Brown, J. W., Columbia, Brazoria co.
Bennett, J. W., “ “
Bronaugh, F, L., Egypt, Wharton co.
Bernard, E. H., Webster. Wood co.
Crooms, Dr., Kennebec Colony, Anderson co.
Cutler, A. D., Cheesland, Angelina co.
Cooke, H. J., Bellville, Austin co.
Clarke, P. S., Hempstead, “
Cunningham, J. P., “ “
Chester, Dr., Industry, “
Crech, Ahim., Bastrop, Bastrop co.
Cupples, George, San Antonio, Bexar co.
Carothers, A. E., “ “
Cole, Dr., “ “
Cockrane, Dr., Brazoria. Brazoria.
Conger, Dr.,Millican, Brazos.
Cornelius, Dr., Acton, Buchanan co.
Coyell, Dr., Gatesville, Burnet co.
Crisp, D. R., Columbus, Colorado co.
Cochrane, Dr., Dallas, Cass co.
Connor, Ed., Richmond, Fort Bend co.
Campbell, M., Galveston, Galveston co.
Carrison, “ “
Cain, G. W., Marlin, Falls co.
Cunningham, Dr., Bellemont, Gonzales co.
Clemons. Dr., McGaity, “

Code, E. M., Navasota, Grimes co.
Cowling, Dr., Houston, Harris co.
Crain, John R., Marshall, Harrison co.
Craig, L. A., Hillsborough, Hill co.
Cooley, J. A., Crockett, Houston co.
Cardiff, W. H., " "
Corley, W. F., " "
Currie, E. " "
Cracken, G. H. M. Indianola, Jackson co.
Clarke, H. S., Hackberry, Lavacca co.
Cook, J. P., Liberty, Liberty co.
Coleman, W. S., "
Clark, T. N., Waco, McLennan co.
Chin, R. H., Caney, Matagorda co.
Campbell, Dr., Jefferson, Marian co.
Cun, C. H., Rural Shade, Navarro co.
Carrington, Dr., Moscow, Polk co.
Cochrane, C. L., Coleter, Polk co.
Cameron, Wheelock, Robertson co.
Collins, J., " "
Cole, D. R., Stirling, "
Collins, Dr., Mount Vernon, Titus co.
Culberson, D. C., Austin, Travis co.
Cullough, " "
Cowart, J. D., Town Bluff, Tyler co.
Campbell, Dr. Pittsburg, Upshur co.
Cundiff, Dr., Coffeeville, "
Couch, Dr., Simpsonville, "
Campbell, F., Waverly, Walker co.
Curry, B. P., Brenham, Washington co.
Calwell, J. H., Waco, McLennan co.
Cortes, Dr., Corsicana, Navarro co.
Chew, J. R., Sutherland Spring, Wilson co.
Dickson, C. D., Anderson, Grimes co.
Dial, W. H., Owensville, Robertson co,
Dubose, A. H., Homer, Angelina co.
Drayton, Dr., Sandy Point, Brazoria co.
Duke, Dr., Alvarado, Buchanan co.
Douglass, Dr., Comanche Peak, Buchanan co.
Denman, M. R., Alleyton, Colorado co.
Davis, Dr. San Marcos, Hays co.
Donnard, Dr., Towash, Hill co.
Dawson, A. J., Crockett, Houston co.
Daney, Dr., Centreville, Leon co.
Davis, R., Port Sullivan, Milan co.
Doney, Dr., Gray Rock. Titus co.
Downs, J. H. W., Gonzales co.
Dashill, Dr., Kauffman, Kauffman co.
East, W. A., San Antonio, Bexar co.
Eastland. W. D., " "
Edrington, Dr., Millican, Brazos co.
Elliott, Dr., Gainsville, Cooke co.
Eastline, Dr., Gonzales, Gonzales co.
Elmore, A. M., Pilot Point, Denton co.
Edwards, T. S., Anderson, Grimes co.
Ereles, B. F., Marshall, Harrison co.
Eagan, S., " "
Eastman, Dr., Jefferson, Marion co.
Evergreen, Washington co.
Edwards, M. H., Crockett, Houston co.
Ferrell, Dr., Harrington, Angelina co.
Fielder " Millheim, Austin co.
Farner, " Millican, Brazos co.
Fields, A., Mohamed. Burnett co.
Farland, S. J., Burnett, "
Fielding, N. D., Wallasville, Chambers co.
Foot, J. A. McKinney, Collins co.
Francis, C. C., Rusk, Cherokee co.
Forman, Zim., Fairfield, Freestone co.
Freeman, W., Sugar Cane, Fort Bend.
Floris, G. A., " "
Ford, A. E., Richmond, "
Foster, Dr. Rainsop, Fayette co.
Forbes, Robt., Marlin, Falls co.
Fennell, Seguin, Gaudaloupe co.
Featherstone, Dr., Marlin, Falls co.
Foster, Dr., Prairie Plains, Grimes co.
Franklin, M. B., Seguin, Gaudaloupe co.
Flint, A. B. Marshall, Harrison co.
Feilden, G. H., Liberty, Liberty co.
Friy, Joseph, Caney, Matagorda co.
Fountain, Dr., Port Sullivan, Milam co.
Faubien, W. W., Milan, "
Ford, Dr., Binksville, Newton co.
Forsyth, Dr., Wheatville, Titus co.
Ford, George, Gilmore, Upshur co.
Ford, Henry, Dark Corner, "
Fisher, J. F., Waverly, Walker co.
Foote, Frederick, Wharton, Wharton co.
Green, Dr. Tennessee Colony, Anderson co.
Gann, N. W., Homer, Angelina co.
McGregor, Dr., Industry, Austin co.
Gibson, Dr., Hockley, Harris co.
Good, W. H., Salado, Bell co.
Ganslen, J, J., San Antonio, Bexar co.
Grimault, " "
Gatewood, Dr., Nolins River, Buchanan Johnson co.
Green, Rowan, Columbus, Colorado co.
Grafenread De, Dr., Oakland, "
Gamage, W. S., Rusk, Cherokee co.
Grayson, F. B., Fairfield, Freestone co.
Goodlett, J. E., Richmond, Fort Bend co.
Gregory, Dr., LaGrange, Fayette co.
Gantt, Prof., W. W., Chappell Hill.
Gill, Dr., Goliad. Goliad co.
Griffin, Dr., Oquilla, Hill co.
Gay, " Alabooman. Houston co.
Gantt, Dr., Turner's Point, Kauffman co.
Gehent, Dr., Fort Sullivan, Milam co.
Gay, G. W., Wheelock, Robertson co.
Griffin, Dr., Gray Rock, Titus co.
Graham, Dr., Austin, Travis co.
Goldwin, Dr., Victoria, Victoria co.
Gambbell, J. W., Huntsville, Walker co.
Gillespie, Dr., Wharton, Wharton co.
Goodall, Dr., Galveston, Galveston co.
Graves, Dr., Independence, Washington co.
Hamlett, W. J., Palestine, Anderson co.
Hogg, H. L., Homer, Angelina co.
Hill, D. S., Hempstead, Austin co.
Hill, Dr., Bastrop, Bastrop co.
Howard, H. P., San Antonio, Bexar co.
Hardy, J. E., Millican, Brazos co.
Hightower, J. C., Millican, Brazos co.
Hansford, J. L., Burnett, Burnett co.
Hicks, J., Columbus, Colorado co,
Howard, R. G., Alleyton "
Hamilton, Dr.. Columbus, "
Haynes J. W., Dallas, Dallas co.
Harris, R. S., Richmond, Fort Bend co.
Hayden, Galveston, Galveston co.
Haley, Dr., " "
Haslea " " "
Hanny " " "
Heard, T. J., " "
Howard, W. H., Gonzales, Gonzales co.
Hunter, Dr., Sherman, Grayson co.
Hughes, Dr. Denton, Denton co.
Hall, Dr., Courtney, Grimes co.
Howard, W. N., Houston, Harris co.
Hay, H. I., " "
Hayes, Dr., Jaspar, Jaspar co.
Haltow, L. C., Beaumont, Jefferson co.
Hudspeth, Hallettsville, Lavacca co.
Holman, W., Boxville, Lavacca co.
Harrison, W. F., " "
Hopkins, S., Centreville, Leon co.
Howe, S. D., Waco, McLennan co.
Hayden, G. W., " "
Hoffman, John, Castroville, Medina co.
Hall, G. M., Port Sullivan, Milan co,

Herrod, C. B., Montgomery, Montgomery co.
Hill, J. E., Cold Spring, Polk co.
Headon, Dr., Dangerfield, Titus co.
Haynie, S, G., Austin, Travis co.
Henarich, J., Mount Pleasant, Titus co.
Hearndon, Dr., Austin, Travis co.
Hoffman, Ernest, “ “
Harne, Wm., “ “
Hill, Dr., Webberville, “
Harris, Dr., Austin, “
Harrison, Henry, Simpsonville, Upshur.
Harrison, Wm., LaFayette, “
Holloquist, F. D., Gilmore, “
Holloquist, F. C., “ “
Hightower, Huntsville, Walker co.
Hughes, Dr., Danville, Montgomery co.
Hennessey, R. S., Livingstone, Polk co.
Iglehart, Dr., Millican, Brazos co.
Inge, R. J., Courtney, Grimes co.
Irion, Dr., Port Sullivan, Milam co.
Johnson, Wm., San Antonio, Bexar co.
Jamison, R. A., Plantersville, Grimes co.
Jorden, Dr., Anderson, “
Johnson, E. P., Marshall, Harrison co.
Johnson, H. M., Navarro, Leon co.
Jourville, Dr., Jefferson, Marion co.
Jones, Dr., Cold Spring, Polk co.
Jones, David, C., Sterling, Robertson co.
Jourdan, James, Henderson, Rusk co.
January, Dr., Victoria, Victoria co.
Jenkins, S. M., Huntsville, Walker co.
Johnson, J. C., “ “
Jarrons, S. T., Fayetteville, Fayette co.
Jackson, Dr., Mount Pleasant, Titus co.
Jones, Dr., Gonzales, Gonzales co.
Jones, Henry L., Marshall, Harrison co.
Kittrell, P. O., Huntsville, Walker co.
Kircksay, Dr. Palestine, Anderson co.
Kerr, I. N., Hempstead, Austin co.
Kendrick, Carroll, Bastrop, Bastrop co.
Kalteyer, F., San Antonio, Bexar co.
King, D., Dallas, Dallas co.
Koester, J., New Braunsfels, Comal co.
Kellebrew, Wm., Marlin, Falls co.
Knox, Dr., Gonzales, Gonzales co.
Kerr, J. H.. Anderson, Grimes co,
Knox, Orman, Marshall, Harrison co.
Keenan, L. G., Huntsville, Walker co.
Key, J. P., Brenham, Washington co.
Kirkpatrick, L. C., Homer, Angelina co.
Link, Dr., Palestine, Anderson co.
Lenier, Dr., Brazos Bottom, Burleson co.
Lewis, Dr., Indianola, Calhoun co.
Lawrence, Dr., Corpus Christi, Nueces co.
Ladley, Dr., Oakland, Colorado co.
Llewellyn, J. S., Columbus, “
Lewis, Dr., LaGrange, Fayette co.
Lancton, J. O. B., Galveston, Galveston co.
Labadie, N. D, “ “
Lee, J. C., Gonzales, Gonzales co.
Law, F. M., Plantersville, Grimes co.
Lockhart, Dr., Courtney, Grimes co.
Lewis, H., Marshall, Harrison co.
Lipscomb, J. S., Crockett, Houston co.
Lander, J. M., Oakland, Lavacca co.
Laidley, Dr, “ “
Lenerd, K. S, Waco, McLennan co.
Lawrence, John, Palestine, Anderson co.
Lawrence, Corpus Christi, Nucces co.
Lanahan, M., Livingston, Polk co.
Lander, Dr., Henderson, Rusk co.
Leigh, R, H., Webberville, Travis co.
Lang, Dr., Austin, “
Litten, J. M., “ “
Linsacomb, Dr., Long Point, Washington co.
Lewis, Dr., Georgetown, Williamson co.
Laurence, J, A., Plenitude, Anderson co.
Linn, R. C., Columbia, Brazoria co.
Miller, John, Dr., Anderson co.
Manning, W. W., Marion, Angelina co.
McKnight, Dr., Cheesland, “
Morris, A. T., Columbia, Brazoria co.
Mitchell, Dr., Brownsville, Brazos co.
Myers, R, “ “
Munson, Dr., Calwell, Burleson co.
Markham, Dr., Farmersville, Collin co.
Menz, L. D., Brownsville, Brazos co.
M'Clary, S., Dr., Osage, Colorado co.
M'Clary, Columbus, “
Macrocuther, Dr., Hall s Bluff, Houston co.
McDougald, Dr., Rusk, Cherokee co.
Matthews, G. A., Richmond, Fort Bend co.
McInis, G. W., Fairfield, Freestone co.
Milner, W. H., Cotton Gin, “
Mears, W. P., “ “
McGowan, Dr., LaGrange. Fayette co,
Morris, J. W., Marlin, Falls co.
Miller, Dr., “ “
McKee, “ Brenham, Fannin co.
McRae, Dr., Brazoria, Brazoria co.
McFarland, Dr., Burnett, Burnett co.
McGolgan, James T., Buchanan, Johnson co.
Morris, J. N., Marlin, Falls co.
Miller, Dr., “ “
McCraven, Dr., Houston, Harris co.
Maclin, Rev. Peter., “ “
Monhue, Dr., Mound City, Hays co.
Miller, Dr., Peoria, Hill co.
Mucherson, W. H, Crockett, Houston co.
Mitchell, C., Hall's Bluff, “
Moulden, E C., Sweet Home, Lavacca co.
Merrell, E., Waco, McLennan co.
Martin, Dr, Cameron, Milam co.
May, Dr., Port Sullivan, “
Matthews, Dr., Montgomery, Montgomery co.
McWharton, Burksville, Newton co.
Murray, J. D. G, Sabine Pass, Orange co.
Mosely, G. M., Cold Spring, Polk co.
McGrew, Dr. W. P.. Refugio, Refugio co.
Morrison, J. D., Wheelock, Roberson co.
McClendon, Dr., Sterling, “
Mitchell, Dr., “ “
McDowell, Dr., Wheatville, Titus co.
Matthews, Dr,, Mount Vernon,
McCall, Dr., Austin, Travis co.
Morris, M. A., “ “
Moore, J. T., “ “
McCoullough, Dr.. Town Bluff, Tyler co.
Markam, T. W., Huntsville, Walker co.
Merideth, B. C., Chappell Hill, Washington co.
Mott, Dr., Independence, “
Moore, Dr., Wharton, Wharton co.
McGill, C. H., Galveston. Galveston co.
McKnight, J. W., Decatur, Wise co.
Nagle, Dr., Milheim, Austin co.
Neely, J. W., Richmond, Fort Bend co.
Nolan, J. S.. Marlin, Falls co.
Nagle, James, Galveston, Galveston co.
Neily, G. W., Plantersville, Grimes co.
Niblett. R. C., Navasota, “
Newcome, J. S.. “ “
Nowlen, Dr., Prairie Plains, “
Nutt, C. R., Houston, Harris co.
Nelms, W. A., Sumpter, Trinity co.
Norris, J. T., Brenham, Washington co.
Narb, Dr. T., Texas Iron Works. Marion co.
Oaks, Dr. W. E., Waco, McLennan co.
Pye, E. A., Hempstead, Austin co.
Porter, R. R., Columbia, Brazoria co.
Peterson, Dr., Millican, Brazos co.
Power, Dr.. Lexington, Burleson co.
Pilant, E. T., Richmond, Fort Bend co.

Pettis, J. R., " "
Priest, Dr., Marlin, Falls co.
Patrick, G. M., Anderson, Grimes co.
Pickett, Y. M., Bislock, Harrison co.
Porter, Dr., Peoria, Hill co.
Perkins, A. N., Jasper, Jasper co.
Payne. J. H., Cedar Grove, Kauffman co.
Pyle, W. H., Kauffman, "
Patton, A. G., Sweet Home, Lavacca co.
Philips, L. C., Danville, Montgomery co.
Pusher, E. H., Sterling, Robertson co.
Peak, C. M., Fort Worth, Tarrant co.
Pruett, J. W., Wheatville, Titus co.
Pruett, Bam., " "
Philips, W. C., Austin, Travis co.
Parrish, A. H., " "
Pastor, J. H., Sumpter, Trinity co.
Parcell, Dr., Waverly, Walker co.
Prince, J. E., Huntsville, "
Petty, T. S., Union Hill, Washington co.
Perkins, J. P., Chappell Hill, "
Polk, Lewis, Independence, "
Quinny, R., Anderson, Grimes co.
Ross, Dr., San Felipe, Austin co.
Roberts Dr., Millican, Brazos co.
Reilly, Dr., Calwell, Burleson co.
Reuss, J. M., Indianola, Lavacca co.
Rains, C. B., Rusk, Cherokee co.
Ransom, R., Fairfield, Freestone co.
Robinson, S. T. & A., Marlin, Falls co.
Rupell, J. C., Richmond, Fort Bend co.
Routh, Dr., Pin Oak, Fayette co.
Ross, Dr., Marlin, Falls co.
Ranklin, Seguin, Gaudaloupe co.
Ring, Dr., Kentucky Town, Grayson co.
Riddell, W. P., Houston, Harris co.
Rhodes, J. E., Stevensville, Erath co.
Rainey, Frank, Crockett, Houston co.
Reaves, S. H., Liberty, Liberty co.
Ranson, D. J., Fairfield, Freestone co.
Rugeley, H. L., Caney, Matagorda co.
Rommons, B. F., Sterling, Robertson co.
Ryan, P., " "
Roberts, J.J., San Augustine, San Augustine co.
Rutherford, Dr., Mount Vernon, Titus co.
Ridel J. R., Mount Pleasant, "
Roughter, J. R., " "
Renfro, C. D., Austin, Travis co.
Robertson, J. W., " "
Richardson, D. F., Pittsburg, Upshur co.
Richardson, J. A., Carpsville, "
Rogland, Dr., Gilmore, "
Rogland, Dr., Victoria, Victoria co.
Rawlings, W. A , Huntsville, Walker co.
Rogers, W. L., Chappell Hill, Washington co.
Rogers, Edward, " "
Ross & Randell, " "
Read, Dr., Gay Hill, "
Rankin, Dr., Round Top, "
Rand, J. J., Independence, "
Robertson, Dr., " "
Rutherford, Mount Pleasant. Titus co.
Sanders, Morton, Buchan, Johnson co.
Shumoth, Dr., Palestine, Anderson co.
Shuralter, George, Hempstead, Austin co.
Schleppergrell, F., Tilly, Bastrop co.
Storke, Dr., Bastrop, "
Salmon, R. G., Brazoria, Brazoria co.
Seeds, O. H., Columbia, "
Scott, L. J., Millican, Brazos co.
Smith, B. M. C., McKinney, Collin co.
Scott, Dr., Gainsxille, Cook co.
Snodgrass, Osage, Colorado co.
Simkins, J. F & J. M., Columbus, Colorado co.
Shannon, Dr., " "
Schley, E. B., Richmond, Fort Bend co.
Stanley, Dr. Fairfield, Freestone co.
Sherrand, Z. L., Richmond, Fort Bend co.
Stone, S. A., " "
Shro, Dr., Rutersville, Fayette co.
Smith, Dr., Fayetteville, "
Stevens, Dr., Galveston, Galveston co.
Smith, W. R., " "
Smythe, DePort, Galveston, Galveston co.
Sweat, Dr. Waxhatche, Ellis co.
Sears, A., Marshall, Harrison co.
Scofield, Dr., Hillsboro, Hill co.
Stewart, J. H. Randolph, Houston co.
Stockley, Dr., Springfield, Limestone co.
Sears, J. H., Waco, McLennan co.
Smith, Wm., Buena Vista, Shelby co.
Smart, John, Fort Worth, Tarrant co.
Steiner, J. M., Austin, Travis co.
Spring, D. V., " "
Styles, W. S., " "
Shore, Wm., Gilmore, Upshur co.
Sherlock, Dr., Pittsburg, "
Smyrle, J. K., Huntsville, Walker co.
Spann, J. T., Chappell Hill, Washington co.
Skinner, Dr., Wharton, Wharton co.
Tice, B. V., San Antonio, Bexar co.
Towsy, A. J., Galveston, Galveston co.
Tompkins, Dr., " "
Tullis, J. T., " "
Turner, Richard, Columbia, "
Taylor, R. H., Millwood, Collin co.
Tait, C. W., Columbus, Colorado co.
Toliver, Dr., " "
Tobin, W. H., Alleyton, "
Thomas, D. B., Dallas, Dallas co.
Traver, L., Surgeon U. S steamer Tallapoosa, Galveston, Galveston co.
Truehart, C. W., " "
Tripple, J. H., Marlin, Falls co.
Thomas, Jesse, " "
Thomas, Dr., Gonzales, Gonzales co.
Tate, Dr., " "
Tucker, Edward, Plantersville, Grimes co.
Terrell, E. F., Anderson, Grimes co.
Turner, Dr., Concord, Hardin co.
Troupe, Dr., Boxville, Lavacca co.
Thompson, T. C., Caney, Matagorda co.
Thompson, J. R., " "
Thornton, Dr., Refugio, Refugio co.
Taylor, Dr., Austin, Travis co.
Taylor, M. A., " "
Taylor, Dr., Town Bluff, Tyler co.
Thornton, Dr., Victoria, Victoria co.
Thomason, J. A., Huntsville, Walker co.
Trainham, Di., Chappell Hill, Washington co.
Tottingham, Dr., " "
Taylor, F. F., Beaumont, Jefferson co.
Vaughan, J. R., Rusk, Cherokee co.
Viser, Dr., Hallettsville, Lavacca co.
Watley, Dr., Wild Cat, Anderson co.
Watson, R. C., Hempstead, Austin co.
Williams, J. N., Bastrop, Bastrop co.
Walker, Dr., Millican, Brazos co.
Washington, L. A., Columbus, Colorado co
Wilson, Dr., " "
Watkins, B. B., Oakland, "
Watkins, Brenham, Wnshington co.
Weiseger, Dr., Clinton, DeWitt co.
White, Dr., " "
Wurlough, J. A., Concord, "
West, T. M., McKinney, Collin co.
Wade, E. A., Rusk, Cherokee co.
Wellborn, Richmond, Fort Bend co.
J. T. Weaver, Almada, Johnson co.
White, R. W., LaGrange, Fayette co.

Wilkinson, R., " "
Williams, H. F., Marlin, Falls co.
Welch, S. M., Galveston, Galveston co.
Watkins, J. L., Chappell Hill, Washington co.
Webb, John H., Galveston, Galveston co,
Winn, P. C., Gonzales, Gonzales co.
Witherspoon, H. F., Marshall, Harrison co.
Whittey, Dr., Crockett, Houston co.
Walker, Dr., Hallettsville, Lavacca co.
Wilkerson. M. M., " "
Willis, J. M., Waco, McLennan co.
Wallace, D. R., " "
Wheeler, J. W., " "
Wooler, Dr., Jefferson, Marion co.
Woolridge, Dr., Danville, Montgomery co.
West, Dr., Burksville, Newton co.
Walker, G. W., Tyler, Tyler co.
Wilkinson, Dr., Wheatville, Titus co.
Ward, Robert, Austin, Travis co.
Whitehead, John, Perch, Free College.
Winnie, Dr., LaFayette. Upshur co.
White, Dr., Waverly, Walker co.
Wyatt, Dr., Washington, Washington co.
Wightman, John S., Rusk, Cherokee co.
Yell, Dr., Double Horn, Burnett co.
Young, Dr., Owensville, Robertson co.

MORTALITY STATISTICS OF THE CITY OF GALVESTON, TEXAS, 1866.

D SEASE.	Men.	Women.	Boys.	Girls.	Natives.	English.	German.	French.	Scotch.	Irish.	All others.	AGES.										Total Males.	Total Females.	Grand Total.
												Under 1 year.	From 1 to 10.	From 10 to 20.	From 20 to 30.	From 30 to 40.	From 40 to 50.	From 50 to 60.	From 60 to 70.	From 70 to 100	Unknown.			
Abscess			1		1								1									1	7	1
Asphyxia	1				1																1	1		1
Abortio			7	7	14							14										7	1	14
Asthma	1						2							1		1						1	8	1
Apoplexia	1	1			7	1	1	1			5		1		3	1	1	5	3		1	1	1	2
Anasoarca	6	8	1		1							1										7	1	15
Apthae				1	1												1							1
Bronchitis		1										2	1				1						1	1
Cerebritis	1		2	1	4												1					3	1	4
Cancer (uteri)		1			5								3											1
Cynanche Trach.			5		1							2	4	1	4	8	2	3			1	5	6	5
Cholera Morbus.	13	5	5	1	11	2	7			2	2	1	1	4	12	13	8	3				18	9	24
Cholera Ep	30	8	2	1	21	2	7			7	6		8		1	2						32	4	41
Convulsio	2	1	9	3	14					1		4	1									11	1	15
Cholera Infantum			1	1	2							1	1	1	1			1				1	1	2
Congestio	2	1	1		3		1						2			1						3		4
Colica Pictona	1				1								21		2	2	3	1		2		1		1
Diarrhœa	6	4	2		4		1	1		4	2											8	4	12
Dentitio			7	14	21												1		1			7	14	21
Despepsia	1									1										1		2		1
Debilitas	1		1		2							1										1		2
Diptheria				1	1								1								1		1	1
Dysenteria	6	4	7	6	20		2	1		1		2	12	1	1	2	2	1				13	10	23
Drowned	3				1					1			5	1	1	5	2	3	2			3		3
Enteritis	9	7	6		16	2	3			3	2	6	2	2	9	8	2	1				15	13	28
Feb. Congestiva	19	4	1		15		3		4		2		5		2	1	3	1				20	4	24
" Typhoides	4	2	2	3	9		2		1						1		1					6	5	11
" " Icterodes	1				1												1					1		1
" Typhomal	1																	1			1	1		1
" Continua	1	1	1	2	5		1					1	3								1	2	3	5
" Remittens	2	2		1	3		1			1				1	1	1	1				1	2	3	5
Gastritis		2			2										1								2	2
Hepatitis			2		2							1		1								2		2
Hydrocephalus				1	1								1									1	1	1
Hemorrhagia			1	1	2							2			1							1	1	2
Icterus	4				1		1			1					1		1	2				1		4
Ictus solis	1				1																	4		1
Morbus cordis	1				1											1		1				1		1
Myelitis	1										1		13	7	6	4	7		5	6				1
Pneumonitis	15	11	12	2	36		3			1	1		4	1	2	8	4	3	1			27	13	40
Phthisis	17	3	2	2	17	1	1			2				1		1						19	5	24
Parturitio		2			2											1	1						2	2
Paralysis	1	1			1		1															1	1	2
Rubeola	1	1	7	4	13								10	1	2								5	13
Rheumatismus	1	1					1			1						1			1			8	1	2
Senectus	5	6			8		1				2											5	6	11
Syphilis	1																		5		2	1		1
Splenitis			1		1				1				1									1		1
Suicide	6	1			5		2							1	1	2	2		1			6	1	7
Scalded			1		1								1									1		1
Strain	1				1									1								1		1
Scarlatina			1		1								1									1		1
Tetanus			5	3	8							4	4									5	3	8
Unknown	16	2	20	16	43	1	1	1		1	7	19	19	2	5		2	5				36	13	54
Variola	4	4	2	2	7						1		3	4	3	1				1		6	6	12
Vulnus sclopet	11				10					2			1	2	5	2	2					11	1	12
	207	85	116	79	351	9	43	4	6	29	31	61	130	34	66	69	48	31	20	10	9	313	164	477

Arranged by

R. H. HANNA, M. D.,
House Surgeon I. C. Hospital.

Misprint

Bibliographical Notices.

Elements of Medical Chemistry.—By B. Howard Rand, M.D., Professor of Chemistry in Jefferson Medical College. T. Ellward, Zell & Co., 17 and 19 south side sixth st., Philadelphia, publishers.

This is an admirable little book, 399 pages. "The volume may be regarded as a full set of notes of the author's course of lectures in the Jefferson Medical College," and is especially intended for medical students. It brings the science up to the present time, and the copy sent us is in advance of its general publication, but can be had from the publishers for two dollars, currency. We have recommended it to our students as a most accurate and well arranged work, though we are prejudiced against little works, as they generally give superficial instruction, but this is thorough so far as it goes, and will assist the reading of more extensive works.

Orthopædics.—A treatise on Prevention and Correction of Deformities, by David Prince, M.D., Philadelphia. Lindsay & Blackister, publishers, 1866. Price, $3.

This is a summary of all the latest improvement in deformities, whether idiopathic or traumatic. It is well illustrated with engravings and is a good guide to the treatment of spinal curvature, club-foot, morbus coxarius, torticollis, &c., &c. We have been much interested and instructed in its perusal, and anyone having cases to treat should send for a copy. By it he can order from the makers any instrument desired, and have it made to fit each individual case. No cases in surgery are more troublesome to treat, and many physicians abandon them to their fate without trying to relieve, which is all wrong, as, with the assistance of this little book, he can treat them at his leisure and satisfactorily.

Asiatic Cholera.—A Treatise on its Origin, Pathology and Cure (?); by E. Whitney, M.D., and A. B. Whitney, A.M., M.D,, late Physician and Surgeon to Diseases of Women in the North-western Dispensary, Visiting Physician, &c., 1866. M. W. Dodd, publisher: No. 506, Broadway, New York.

It comprises almost all we know of cholera, and will pay any one to read it.

Hamilton on Fractures and Dislocations.—A practical Treatise on Fractures and Dislocations; by Frank Hastings Hamilton, A.B., A.M. M.D., Prof. of the Principles of Surgery, Military Surgery and Hygiene, and of Fractures and Dislocations; Bellevue Hospital Medical College; Surgeon in Bellevue Hospital, New York; Professor of Military Surgery, etc., in Long Island College Hospital; Author of a Treatise on Military Sugery—third edition—revised and improved, illustrated with two hundred and ninety-four wood-cuts.

This is *really an invaluable work.* It is an improvement on the former editions, which were, for their time, superior to any English work, and the only work we have seen on these special subjects. Every surgeon should have a copy. It is beautifully illustrated and well printed. It brings the subjects down to the present year, with all the latest improvements. The doctor advances some new ideas and has eliminated some others, some of which we intended to have mentioned; but advise all to get the book and read for themselves; for our part, we saw nothing to object to, but much to praise.

Pereira's Materia Medica and Therapeutics—Wood.—Manual of Materia Medica and Therapeutics, being an abridgment of the late Dr. Pereira's Elements of Materia Medica; arranged in conformity to the British Pharmacopœid, and adapted to the use of Medical Institutions, Chemist and Druggist, Medical and Pharmaceutical Students, &c. By Frederic John Farre, M.D., Contab, F.S.S., &c., &c., &c.; assisted by Robert Bentley, M.R.C., F.S.S., &c., &c., &c., and by Robert Warrington, F.R.S., F.C.S. Edited, with numerous references to U.S. Pharmapœa, and many other additions, by Horatio Wood, Jr., M.D., Prof. of Botany University of Pennsylvania, Auxiliary Faculty of Medicine; Member of American Philosophical Society; Recording Secretary to the Academy of Medical Science; Fellow of the College of Physicians of Philadelphia; Corresponding Member of the New York Lyceum of Natural History, &c., &c.; with two hundred and thirty-six wood-engravings. Philadelphia: Henry C. Lea, publisher, 1866.

This is the quintesence of valuable matter, and, for students, the most accurate and conclusive work we know of. There is nothing in it but what is of the utmost importance, and nothing left out that we would wish inserted.

Diagnosis and Prescription Record.—William Wood &c., 61, Walker-st., New York. Retail price, $1.

This is a conveniently arranged book, by which the physician can keep a copy of all his prescriptions, date of prescription, name of patient, age, disease, pulse, perspiration, heat. It is invaluable in practice of public institutions, hospitals, poor-houses, jails, &c. We are using the one sent us in county jail.

Physicians Visiting List for 1867.—Philadelphia: Lindsay & Blackiston.

Contents :—Almanac, Table of Signs, Marshall Hall's Ready Method in Asplyia, Poisons and their Antidotes; Table for consulting the period of Utero-gestation; blank leaves for visiting list:

Blank leaves for Monthly memoranda,
" " " Address of patients and others,
" " " " " Nurses—their references,
" " " Accounts asked for,
Memoranda of wants,
Obstetric engagements.
Vaccination engagements.
Record of Births,
" " Deaths,
General memoranda, &c.

No physician practising in the country should be without one; but we prefer the Diagnosis, &c, for city and public institutions.

Medical Diagnosis, with reference to the practice of Medicine, a guide to the Knowledge and Description of Diseases, by J. W. DaCosta, M.D., Lecturer on Chemical Medicine, and Physician to the Pennsylvania Hospital; Fellow of the College of Physicians of Philadelphia; President of the Pathological Society of Philadelphia; Corresponding member of the New York Medical Society, etc., etc. Illustrated with engravings on wood; second edition, revised. Philadelphia: J. B. Lippencott & Co, 1866.

A good work, well printed and illustrated. The Diagnosis of Diseases of the Skin is deficient. We looked for a complete description of disease of the skin in a work of this kind. There is no more difficult subject, and one of more importance than this, and we hope the author will supply, in his next edition, this deficiency. The subject is only confessedly touched on in this edition, without any illustrations. It is almost impossible for country practitioners to give a clasical name to diseases of the skin, and much more importance should be given to this subject in works of special diagnosis; and if any illustrations are admitted, these should not be left out. In justice to the author we will say his work is as complete as our works on special practice. We wish the work great success.

Lectures on Orthorpædic Surgery, delivered at the Brooklyn Medical Institute, with numerous illustrations. By Louis Brauer, M. D., M.R.C.S., England; Prof. of Anatomy and Surgery; Licentiate of the

New York State Medical Society, &c., &c., &c. Philadelphia: Lindsay & Blackiston, 25, South sixth street, above Chestnut, 1864.

This work treats of the use of the wire splint, which has given the author a world-wide reputation.

Instruction in the Preparation, Administration and Properties of Nitrous Oxide, Protoxide of Nitrogen, or Laughing Gas—By George T. Baker, D.D.S., Professor of the Principles of Dental Surgery and Therapeutics in the Pennsylvania College of Dental Surgery, etc., etc. Philadelphia: Rubenmane & Stockton. 1866.

Well printed and illustrated. All dentists should have a copy. It teaches plainly the use of this gas and its use in extracting teeth. This gas is not dangerous and can be used by non-professional men.

SHOWING THE NUMBER OF DEATHS PER MONTH DURING THE YEAR.

MONTHS.	MEN.	WOMEN.	BOYS.	GIRLS.	NATIVE.	FOREIGN.	TOTAL.
1866							
January........	16	6	10	5	30	7	37
February.......	9	10	10	10	34	5	39
March..........	18	5	14	10	41	6	47
April...........	5	5	12	5	21	6	27
May............	8	6	5	6	23	2	25
June...........	9	4	10	9	27	5	32
July	13	6	4	4	16	11	27
August.........	41	16	13	10	53	27	80
September	14	6	11	4	26	9	35
October........	24	9	8	3	27	17	44
November......	35	9	10	7	39	22	61
December......	29	7	14	9	45	14	59
	221	89	121	82	382	131	513

Commutation.

We will send the GALVESTON MEDICAL JOURNAL and any one of the following periodicals at the prices specified in the following list, or any of the following journals separately, upon the reception of the CASH. Subscriptions must be from January to January, or from volume to volume :—

	SUBSCRIPTION PRICE.	GALVESTON MEDICAL JOURNAL.
Boston Medical and Surgical Journal (Weekly)	$4.00	$8.00
New York Medical Record (Fortnightly)	4.00	8.00
“ “ Medical Journal (Monthly)	5.00	9.00
Druggist's Circular)Monthly)	1.50	6.00
Journal of Applied Chemistry (Monthly)	2.00	6.50
London Lancet—Republication (Monthly)	5.00	8.00
Braithwaite's Retrospect—Republication (Semi-annual)	2.50	7.00
Canada Medical Journal (Monthly)	3.00	7.00
Buffalo Medical Journal (Monthly)	3.00	7.00
Detroit Review of Medicine and Pharmacy (Monthly)	3.00	7.00
American Journal of Insanity (Quarterly)	4.00	8.00
“ “ Medical Sciences, (Quarterly)	5.00	9.00
The Dental Cosmos (Monthly)	2.50	7.00
Richmond Medical Journal (Monthly)	5.00	9.00
Southern Medical and Surgical Journal Augusta, Ga., (Bi-monthly)	5.00	9.00
Savannah Medical Journal (Bi-monthly)	4.00	8.00
Atlanta Medical and Surgical Journal (Monthly)	4.00	8.00
New Orleans Medical and Surgical Journal (Bi-monthly)	8.00	11.00
“ “ Southern Journal of the Medical Sciences (Quarterly)	8.00	11.00
“ “ Medical Record (Fortnightly)	8.00	11.00
Nashville Journal of Medicine and Surgery (Monthly)	5.00	8.00
Memphis Medical and Surgical Journal (Monthly)	5.00	9.00
St. Louis Medical and Surgical Journal (Bi-monthly)	3.00	7.00
“ “ Medical Reporter (Fortnightly)	3.00	7.00
Chicago Medical Examiner (Monthly)	3.00	7.00
“ Medical and Surgical Journal (Monthly)	2.00	6.50
Cincinnati Lancet and Observer (Monthly)	3.00	7.00
“ Journal of Medicine (Monthly)	2.00	6.50
Pacific Medical and Surgical Journal (Bi-monthly)	3.00	7.00
Atlantic Monthly—Boston	4.00	8.00
Every Saturday “ (Weekly)	5.00	9.00
Our Young Folks “ (Monthly)	2.00	6.50
Littell's Living Age “ (Weekly)	8.00	11.00
Harper's Monthly—New York	3.00	7.00
Hours at Home “ (Monthly)	3.00	7.00
The Nation “ (Weekly)	5.00	9.00
The Galaxy “ (Fortnightly)	5.00	9.00
Army and Navy Journal, New York (Weekly)	6.00	9.50
Agriculturist “ (Monthly)	1.50	6.00
Godey's Lady's Book—Philadelphia (Monthly)	3.00	7.00
Peterson's Lady's Magazine “ (Monthly)	2.00	6.50
Arthur's Home Magazine “ (Monthly)	2.50	6 50
Archives General De Medicine and Chirurgie (Monthly)	12.00	16.00
Schmidt's Iahrlucher Gessamten Medicine (Monthly)	12 00	16.00
Zeitschrift fur Practische Heilkunde (Weekly)	12.00	16.00
Canstatt's Iahresbericht der Medicine (an able Review, Bi-monthly	12.00	16.00

METEOROLOGICAL TABLE FOR DECEMBER, 1862, AT HOUSTON.

TIME.		BAROMETER.		MEAN OF BAR.	WINDS.		SUN RISE	1-3P M	SUN SET	MEAN THER.	CLOUDS.		RAINS, FOGS, &C.		
		A. M.	P. M.		A. M.	P. M.					A. M.	P' M.	A. M.	P. M.	NIGHT.
Mon	1	08, 14	10, 12	30.11	N3, N2	N2, N2	50	59	60	56	cc3, cc9	cc8 ... cc10 ... cc10			R
Tues	2	13, 14	07	30.10	NE2, E2	N2, N2	54	54	50	51	n10, n10	n10 ... n10	ths	R ... R	R
Wed	3	06, 09	04, 05	30.07	N1, N2	N1, N2	45	50	50	48	n10, n10	n10 ... n10			R
Thurs	4	96, 97	90, 93	29.93	NE0-1, N-01	N0-1. W1	50	52	52	51	n10, n10	n10 ... n10 ... n10	R ... R	R	R
Fri	5	11, 16	14	30.14	N3, N3	N3, N2, N1	44	52	53	50	cc8, cc10	cc5 ... ci1 ... cistr2			
Sat	6	19, 25	18, 20	30.22	N0, N1	N1, N0	36	56	60	51	ci1, ci1	ci2 ... ci2	frost		
	7	24, 29	27 ... 26	30.26	0 ... 0	N1, N1, 0	35	65	61	54	0 ... 0	0 ... 0 ... 0	frost		
Mon	8	23, 29	25, 26	30.26	0, NE0-1	SE2. SE2, SE2	40	70	64	58	0 ... 0 ... cc5	cc5 ... ccs3	frost		
Tues	9	28, 34	27	30.30	N1, N1	E2, E2, S2	46	75	65	62	ci4 ... ci5	ci2 ... cc2 ... ccs4	fog		
Wed	10	22, 27	16, 17	30.21	0, NE1	E2-3, E2-4, E2-3	46	60	58	55	ccs8, ... ccs9	ccs10 ... ccn10 ... n10			spr ... R
Thurs	11	06, 07	02, 98, 99	30.02	E2, E3-4	E3-4, E3-4	58	68	60	60	n10 ... ccn9	ccn10 ... ccn10	R	spr	spr
Fri	12	89, 89	78, 74	29.81	0, S1, S-3	S3-5, S1-4, S2-5	57	72	70	66	fc10, ... ccn10	ccn10 ... ccn10	fog	spr, R	R
Sat	13	81, 85	79, 83	29.82	S3-4, S3-5, S4-6	E3-5. S3-5, S2-3	70	74	72	72	ccn10 ... ccn10	ccn9 ... n10	spr, spr, spr	R ... R	R
	14	86, 89	78, 79	29.83	S2-4, S2-3, S3-5	S[illegible] S-24	68	78	71	71	n10 ... n10	n10 ... ccn8	R ... R	ths ... R ... R	R
Mon	15	85, 98	09, 10	29.98	N3-5, N3-4	N2-5, N2-4, N1	55	68	57	60	n10 ... cc8 ... ci5	ci5 ... ccci5 ... ccs3	R		
Tues	16	28, 39	34	30.33	0. N1	N0-1, W1, 0	40	70	65	58	ccs2 ... 0	0 ... 0 ... 0	frost		
Wed	17	42, 53	45, 46	30.48	0 ... 0	0, S0-1, 0	38	75	70	61	0 ... ci	0 ... ci ... ci	frost		
Thurs	18	47, 52	40	30.46	0 ... 0	E1-2, E1-2, 0	42	77	55	58	cc5 ... sc7	cicu8 ... cicc6 ... cc6	frost		
Fri	19	35, 38	31, 29	30.34	0 ... N1	E1, E1, 0	44	78	57	60	ci3 ... 0	cicu5 ... cicu5 ... cc3			
Sat	20	31, 36	31	30.33	0 ... E1	E1, E1, E1	46	70	60	59	cicc6 ... ci6	cicuc ... cicu5 ... ccci9			
	21	30, 35	31	30.33	0 ... E1	SE2, SE2-3, SE	48	66	64	59	ces4 ... cc8	cc9 ... cc7 ... cc3			
Mon	22	26, 29	19, 20	30.24	SE1, SE2-3	SE2-3, SE2-3, SE	56	72	65	64	ccs9 ... cc7	cc9 ... cc10 ... ccs6		spr	
Tues	23	13, 15	07, 09	30.11	SE1, SE1	SE2-3, SE1-2, SE	60	69	64	64	ccs10 ... ccs10	cc10 ... cc10 ... cc10	R	spr	R, ths
Wed	24	14, 16	10, 11	30.13	0, SE1-2	SE1-2, SE2-3, SE	62	77	68	69	fog——cc5	cc7 ... ccci7 ... ccs	fog	spr, spr, shr	
Thurs	25	09, 11	97	30.04	SE1-2, S1-2	S2-3, S2-4, S2-4	64	74	70	69	ccs7 ... fc9 ... cc8	cc8 ... cicu6 ... cicus6		spr	shr
Fri	26	96, 98	90, 91	29.94	S1, S2	S2-3, E1-2, sw0	63	76	73	71	ccs7 ... cicu8	cc7 ... ccci7 ... cc5		spr	
Sat	27	00	15, 10, 12	30.07	N2-3, N2-4	N2-3, N1-2, N1-2	56	60	57	57	cc10 ... cc10	cc9 ... cc7 ... cc8	spr		
	28	12, 15	05, 06	30.10	0, E1	SE2-3, SE2-3, S	44	67	58	56	cc5 ... ci3	cc8 ... cc7 ... cc6			
Mon	29	94, 96	86	29.91	0, S1	S1, S1-3, sw1-2	57	67	68	64	cc8 ... ccn9	n10 ... n10 ... cc6	spr	R ... R ... R	
Tues	30	09, 19	15, 18	30.14	N3-4, N3-5	N3-5, N3-5, N1-2	44	50	48	47	cccu5 ... cc5	ci4 ... ci3 ... ci3			
Wed	31	25, 28	24	30.26	0, NE1.2	E2-3, SE2-3, SE1	36	68	58	54	ci1 ... ci1	0 ... 0 ... ci2	frost		

Highest range, 30'53; lowest, 29'73. 30'13.77, mean of the month. Highest range, [illegible]. 59°19, mean for the month. Lowest range, 35°. Thermometer under fair exposure, but affected by reflection, for which allowance is intended.

GENERAL REMARKS.—2d—Hazy in the morning. 3d—Damp and chilly. 4th—At 9 P. M. nearly clear. 6th—Hazy in the morning. 7th—Hazy in the morning. 8th—Hazy in the morning. 11th—Rains light. 13th—Rain all day at different points. 15th—A light Norther. 17th—Hazy in the morning. 22d—Strong appearance of rain except in the Barometer. 24th—Slight shrs. at distance all day, from 11 A. M. 25th—Occasional shrs. at distance. 26th—Slight shrs. at distunce. 29th—Norther came in at 2 A. M.

METEOROLOGICAL TABLE FOR JANUARY, 1863, AT HOUSTON.

TIME.		BAROMETER. A. M.	BAROMETER. P. M.	MEAN OF BAR.	WINDS. A. M.	WINDS. P. M.	SUN RISE..	1-3P.M	SUN SET...	MEAN THER.	CLOUDS. A. M.	CLOUDS. P. M.	RAINS, FOGS, &C. A. M.	RAINS, FOGS, &C. P. M.	RAINS, FOGS, &C. NIGHT.
Thurs	1	18, 19	07	30.18	E1, E1-2.......	SE3-5, SE2-4, SE2-3	44	66	57	56	cicc4, ccci66......	ccn9, ccn10, cc8.......	....		........shr
Fri...	2	95, 96 ..	.. 80, 81	29.88	S2-3, S3-4	S3-5, S3-4. S3-4.	64	70	68	67	cccu9, cc9.......	ccn10, ccn10, ccn10...	spr L B thr.	..R..th..R	........ths
Sat...	3	80, 83 ..	.. 74, 80	29.78	S1, S2-3, S4-5...	sw4-6w4-6NW1-3	67	76	68	70	ccn9, ccn9........	ccn10, cucc8, ccs, ccci4	spr..shry .th	.....th..shr	shr N W
	4	96, 05 ..	99....95	30.00	0........0......	S1, S1-2, S1.....	40	77	60	59	0, ci3, ci2........	ci2, ci1...............	frost........		
Mon..	5	84, 85 ..	.. 75, 73	29.79	0, S1, SW2-4...	S2-3, SW1-2....	49	78	70	72	0, 0, cc8..........	eccis, ccci4...........			
Tues.	6	91, 03 ..	00....05	29.97	N1-3, N2-3.	NE2-4, NE0-1...	54	76	64	65	0..........0.......	0..........0..........0			
Wed..	7	12, 17 ..	10	30.14	N1-2, E3-4, E2-4	SE3-4, SE1-2...	45	64	59	56	0, 0, cc7..........	ccn9, ccn10...........	hazy.........		
Thurs	8	08, 09 ..	.. 06, 07	30.07	SE1-2, SE1-2...	SE2, E1........0	61	65	68	65	ccn7, cccn8.......	ccn10, cc7, cccus s....	hazy..shry..	........shry	
Fri...	9	06, 07 ..	99....93	30.00	0, E0-1..........	E1-2, E1-2, E1-2	60	68	65	64	n10................	n10. cunci7-10, ccn10..	fgy R shry R	ths..th..ths	...ths..shry
Sat...	10	95, 06 ..	.. 00, 02	30.01	N1-2, N1-2, E1-2	E1-2, ...0	60	76	65	67	cc1, cc3, cc3......	0..........0..........0			
	11	07, 15 ..	.. 09, 09	30.11	N0-1, S0-1.......	S2-3, S1-2. S1-2.	45	76	66	62	0, 0, cc2..........	cc2,...................0	hazy.........		
Mon..	12	08, 15 ..	08	30.11	S1-2, S3-4.......	S3-5, S2-3, S1-2.	60	72	67	66	cc7, cc8, cc9......	cc8, ccci6.............	....		
Tues.	13	06, 10 ..	98	30.04	0, S1-2, S3-4....	S3-5, S2-3.......	60	74	68	67	cc7, ccs8, ccn10...	ccn10, cc7.............	shry.........	....shr..shr	..R. R
Wed..	14	79, 82 ..	.. 65, 68	29.74	S1, S1-2, S3-4..	N1-2 N2-3 N1-3..	67	64	58	63	n10, n10..........	n10, n10, n10.........	R..R..	R..shry..R	...R. R
Thurs	15	83, 99 ..	98, 02, 04	29.93	N4-5, N4-5, N4-5	N4-6, N4.5, N3-4.	34	45	45	41	ccn10, ccn10, cc8..	cc7, cc3..............0	snow........		
Fri...	16	20, 30 ..	.. 24, 26	30.25	N2-3, N2-4......	N2-4, N1-2, N1-0	26	44	44	38	0........0.........	0..........0..........0	ice..........		
Sat...	17	25......	29....27	30.27	0, E1-2..........	SE1-2, SE2-3, SE1	26	60	54	47	cs1, cc8...........	ci3, ci4, ciccstr4.....	frost & ice..		
	18	09......	92....86	29.97	SE3-4, SE4-6...	SE3-6, SE3-5...	48	55	57	50	ccnci9, n10........	n10, n10...............	spr R........	R...R...R	L
Mon..	19	95, 06 ..	.. 00, 06	30.00	N1-2, N2-4......	N2-5NW2-4NW2-3	33	50	50	49	ccs3, cc2..........	cc4, cc3,.............0	....		
Tues.	20	14, 21 ..	.. 16, 17	30.17	0, NW1..........	N1, W1-2, W1-0.	33	65	60	53	1........0.........	ci1, ci1, ci1..........	frost........		
Wed..	21	20, 22 ..	16	30.19	0, E1...........	SE1-2, SE1-3, SE1-2	36	70	60	55	cis2, cc3..........	ci2, ci2, cis3.........	frost........		
Thurs	22	10, 14 ..	.. 03, 04	30.06	0, SE1..........	SE2-4, S3-4. S1-3	52	70	64	62	ccin10, cc10......	ccci9, ccci8, ccs9.....	....		R
Fri...	23	01, 05 ..	98....03	30.02	0, SE1, SE1-2...	S1-2, W2-3, W1-2	59	65	54	59	ccs9, ccn10.......	ccn10, ccn10, n10.....	R..R........	R...shr..R	..R
Sat...	24	03, 07 ..	.. 00, 07	30.03	0, N1-2, N1-2...	N1-2, S1-2, sw1-2	56	60	62	59	n10, n10..........	n10, n10, n10.........	..R..R.......	R...R...R	....R. R
	25	14, 17 ..	.. 09, 10	30.13	0, S1-2, S2-3....	S3-4........S1 2	72	76	64	67	cccus9, cc8.......	cuccs7, cccicustr7, cas7			
Mon..	26	05, 12 ..	.. 08, 12	30.09	S1, N2-3.........	N2-4, N3-4, N2-3	59	58	50	54	ccsn8, n10........	n10, n10, n10.........	R..R	R.....R....	R
Tues.	27	27, 34 ..	33, 25, 26	30.30	N2-3, N2-4......	N2-4, N2-4, N2-3	40	53	48	47	cce6, cc1........0	cc1, cc1...............			
Wed..	28	24, 28 ..	19	30.24	0, N-W1-2.......	0, SW0-1, W2-3.	29	60	55	48	0........0.........	0..........0..........0	frost........		
Thurs	29	10, 15 ..	.. 10, 18	30.12	0, S1-2, SW2-3..	S2-4, S1-2.......	41	75	70	62	0........0.........	ci1, ci1..............0	frost........		
Fri...	30	24, 25 ..	18	30.22	0, N1-2, SE2-3..	SE2-3, SE0-1...	44	70	58	57	cis1, cc1........0	ci1, cis1..............			
Sat...	31	06......			SE1 2..........		54				ccs8.............				
					Force of wind as	2.17 is to 10,					Amount of clouds	as 8.40 is to 10.			

Highest range, 30'34: 30'05.93 mean for 30 days; lowest range, 29'73. 58°23 mean for 30 days; max. range, 78°; min. range, 26°.

GENERAL REMARKS.—2d—Thrs. quite heavy from 6.10 P. M.; shrs. after. 3d—Shrs. at distance all day. 8th—Showers short but sharp. 9th—Much water has fallen 11th—Fine day. 14th—High wind and much rain all night. 16th—Ice from ¼ to 1 inch in the streets; coldest day. 17th—Ice and frost in plenty. 15th—Heaviest rain yet. 22d—Slight rains at night. 23d—Light rains most all day. 24th—Steady and heavy rains. 26th—Rain nearly continuous all day and night. 31st—Left for Galveston; light rains there.

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METEOROLOGICAL TABLE FOR FEBRUARY, 1863, AT Houston.

TIME.		BAROMETER.		MEAN OF BAR.	WINDS.		SUN RISE.	1-3P M	SUN SET.	MEAN THER.	CLOUDS.		RAINS, FOGS, &c.		
		A. M.	P. M.		A. M.	P. M.					A. M.	P. M.	A. M.	P. M.	NIGHT.
	1														
Mon..	2	07, 07	03, 07	30.05	N1, N1-2	SW2-3, W2-3...0	40	70	65	58	0.........0	0, ci1, ci1, cis1			
Tues.	3	23	17, 15	30.19	N2-3, NE2-4	E1-2, E1-2, E1-2	40	48	46	45	ccs8, ccs9	cc10.........ccs10			R
Wed..	4	84....80	85	29.83	E2-3, E2-3	NE2-3, N2-4	42	48	47	46	n10, n10, cc9	ccn10	R...ths...R		
Thurs	5	23, 33	27, 35	30.29	N3-5, N3-4	N4-5, N4-5, N2-3	33	48	45	42	cc5, cc5	0.........0.........0			
Fri...	6	30, 29, 31	18	30.25	0........0	SE2-3, SE2-3, s2-3	25	55	47	42	0.........ci.........ci	ci2.......cis	frost & ice.		
Sat...	7	10, 16	12, 13	30.13	S1, S2-3	S2-4, S2-4, S2-3.	50	67	62	60	ccci5, ccci6, cc9	cc9.......cc9			
	8	16....20	16	30.18	0, S1-2	S1-2, S2-3, S1-3.	60	70	67	66	cc7, cc9, cc9	cc9.......cc9			
Mon..	9	12....18	15, 16	30.15	S1-2, S1-2	S2-3, S2-3, S1-3.	64	76	67	69	cc9, cc9	cc10, cc9, ccn			
Tues.	10	16....18	13	30.15	S1-2, S1-2	S2-3, S2-3, S1-2.	63	77	70	70	fc10, cc7, cccu6	cccu5.......cc8	fog		
Wed..	11	03, 05	95, 97	30.01	S2-4, S2-4	S2-4, S2-4, S1-2.	64	75	72	70	fc10, cc8, cc6	cc5......cccu6			light rains.
Thurs	12	03....09	07, 08	30.06	0, N1-2, S0-3.	E0-1, SE1-2, se1-2	65	73	69	69	cc_s7, cccu9, ccs10	cccu10, cccus10	spr		
Fri...	13	07, 08	96	30.02	N1-2, E1-2, SE2-3	SE2-3, SE1-2	60	76	67	68	cc8, cccistr7, cc8	ccn10,.....ccn10		spr, R, spr.	
Sat...	14	97, 05	97, 00	30.01	S1-2, S1-2	S2-3, S3-4, S2-3.	66	80	70	72	fc10, fc10, cc10	cccu7.....cc8.....cc2	spr	shr	
	15	07, 10	05, 06	30.07	0, S1-2, S2-3	S2-3, S1-2	67	80	72	73	fc10, fc10, cc8	cccu8..cccus9. ccs10	spr	thsN,	shrs all night
Mon..	16	97....99	93	29.96	S3-4, S4-5	S4-5, S2-4, E1-2.	64	71	64	66	n10, n10, ccn10	ccn10.....ccn10	R....R.	spr	R all night.
Tues.	17	87, 96	87, 89	29.91	0....S1-2	sw1-2, n1-2, w1-3	60	62	64	62	n10, n10, n10	fc10, ...cc5,.....cc4	R...R....R		
Wed..	18	88, 93	80	29.87	0....S1-2	S2-3, S2-3, se2-3	50	70	66	62	ci9, fcci8, cc9	ccus8.....ccci5...ci2	hazy		
Thurs	19	90, 99	97, 98	29.94	0....NW1-2	N1-2, N1-2, N1-0	56	76	70	65	0.........0	0.........0.........cc2			
Fri...	20	00, 02	86	29.96	0, NE2-3, E3-4..	E3-5, SE2-4	46	64	60	53	0.......0....str1, cc4	ccs9, ccs10, ccn10		spr	R....R.
Sat...	21	78....89	87, 93	29.86	N3-4, w1-2, nw2-4	W2-4, W1-2	58	74	68	67	n10,.....cccistr4	ci2.....0.........0	R		
	22	14, 19	14	29.17	N2-4, N2-4	N2-3, N1-3, N1-2	43	75	65	61	0.........0	0.......ci1.......ccs4			
Mon..	23	07, 14	10, 08	30.10	0.....E1-2	S1-2, S2-3, SE1-2	45	70	64	60	cccistr4, ci2, cc9	cc5.....cccistr8			
Tues.	24	06, 09	04, 94	30.01	S0-1, E0-1, SE2-3	SE2-4, SE2-4	53	68	64	62	fc.......fc.......fc10	ccn10..........fcn10		R	..R....L.
Wed.,	25	86, 89	75, 76	29.82	se1-2, se1-2, S2-4	S4-5, S1-2	68	72	71	70	ccn10.....ccn10	ccn10, ccn10, n10	....R.....R	spr	R.........ths
Thurs	26	78, 87	83, 90	29.84	N1-2, N3-4, N1-2	E1-2, N1-2, N1-2,	63	76	70	70	ccn10, ccn10, cc7	ccs6, ci3, ccstr8	R		
Fri...	27	96, 03	97, 98	30.00	N1-2, E1-2, SE2-3	SE2-3, SE2-3	58	75	67	67	cc8,.....ccstr9	ccs8.....cc6.......cc8	spr		ths.
Sat...	28	98, 08	07, 09	30.04	N0-1, W1-2, N1-2	N3-4, N3-5, N1-2	62	75	64	67	cc7, fcccs7, cc2	0.........0.........0			
											Amount of clouds	as 5.74 is to 10.			

Max. range, 30·35; Min. 29.·75; 30·05.47, mean for 27 days; 62°29 mean for 27 days; max. range, 80°; min. 25°.

GENERAL REMARKS.—1st—Returned from Galveston. 4th—Heavy rains from 8 to 11 A. M. 5th—High wind from NW all night; Militia organize at Galveston. 9th—The clouds indicate rain. 10th—6 to 7 A. M. fog as cloud; 9 A. M. fog descended to earth. 11th—7 A. M. fog cloud overhead running fast. 13th—Plum trees in blossom. 14th—Spanish Dagger in blossom. 15th—Wind E4-5 during night; FC running fast yesterday and this morning. 16th—Much water has fallen. 17th—Mulberry trees just starting. 18th—Peach trees in blossom. 24th—Slight rains. 26th—6 A. M. upper current of wind SW, lower N.

METEOROLOGICAL TABLE FOR MARCH, 1863, AT HOUSTON.

TIME.		BAROMETER.		MEAN OF BAR.	WINDS.		SUN. RISE	1-3P M	SUN. SET.	MEAN THSR.	CLOUDS.		RAINS, FOGS, &C.		
		A. M.	P. M.		A. M.	P. M.					A. M.	P. M.	A. M.	P. M.	NIGHT.
	1	10....14	05, 03	30.08	0......S1-2, S1-2	S1-2, S1-2	42	76	75	64	cc1......0	0......0......0			
Mon.	2	06....15	08, 10	30.10	0......N1-2	N1-2, N1-2, N1-2	44	77	63	61	0......0	0......0......0			
Tues.	3	16....27	25, 27	30.22	0....N1-2, E1-2	SE1-2, E12, SE1-2	45	75	65	62	0......0	ccs1......cistr1			
Wed..	4	35, 39	36....28	30.34	E1-2, E1-3, SE2-3	SE2-4, SE1-2	44	67	58	56	cistr1, ciI.	ci1....ci2....ci3			
Thurs	5	17, 19	08, 07	30.13	SE2-3, SE2-3	S2-4, S3-5, S2-4.	57	67	65	62	ccs9, ccn10	cc10...ccn10...ccn10			spr......L
Fri...	6	00, 01	90, 90	29.95	S3-4, S2-3	S2-3, S2-3, S2-3.	63	70	67	67	ccrf10,....n10	n10....n10....n10	spr	R..R..spr.	
Sat...	7	89, 90	77	29.84	S2-3, S3-4	S3-4, S3-4, S1-2.	67	78	76	70	fcr10,....cc9	cc10....cc7....cis2	spr,		
	8	78, 79	75, 77	29.77	S1-2, S3-4, sw4-5.	SW4-5, SW2-3	67	85	75	76	cc8....cc6....cicc3	cc5....ccs8			
Mon.	9	87, 94	86, 85	29.89	E2-4, E3-4	E2-3, E1-3, E1-2	62	64	62	63	ccs10, ccn10	ccn10...ccn10...n10	spr	spr......R	R
Tues.	10	81, 81	77....83	29.80	NE0-1, S1-2, S2-3	W2-4, N2-4, N2-4	62	75	53	63	ccci8	ccn10....n10....n10	fog.....spr	R......R..	R
Wed.	11	18....28	25, 29	30.24	N2-3, N2-4, NE3-4	E2-4, N2-4, N1-2	44	70	60	58	cis3....ci4	ci2....ci5....cc6			
Thurs	12	36....45	37, 38	30.40	0....E2-3, SE2-4	SE2-3, S1-2	44	70	62	59	ci3....dci3....dcis6	cidci5			
Fri...	13	30, 33	20, 19	30.26	0......S2-4	S2-5, S2-4, S1-3.	41	75	63	60	0......0	0......ci1......ci1	hazy		
Sat..	14	06, 08	00, 97	30.02	0......S2-3	S4-6, S4-5, S2-3.	55	75	68	66	cistr2, 0, cc2.	cc8...cccu9...ccstr9		spr..	R
	15	90, 93	87, 89	29.90	0......S1-2, S2-3	S2-3, S2-3	63	75	72	70	ccn10...ccn8	ccn9...cccu8...cc3	R..R		L..R..ThL
Mon.	16	98....06	01	30.02	N1-2, E1-2, SE2-3	SE2-3	67	72	70	70	n10..ccnstr10	cccun9......cc6..	R, ths		
Tues.	17	04, 06	03, 02	30.04	N0-1, E1-2, SE2-3	SE1-2, SE1-2	59	81	69	70	ci d cistr	cc4.....cc4......0	hazy		
Wed.	18	00....04	96	30.00	0.....1-2, E1-2	S1-2, S2-3, S0-1.	63	82	70	72	cc10, cc9	cc5.....cc4....cis			
Thurs	19	95....97	90, 89	29.93	0......S3-4	S2-3, S2-3, S1-2.	65	80	69	71	cc8....cc7	ccci7......cis1			
Fri..	20	93....99	95	29.96	0......S1-2	S2-4, S2-3, S1-2.	64	82	72	72	rf10, fc10	ccdci5......dcistr4	fog		
Sat...	21	97, 01	96, 96	29.98	0......S3-4	S3-5, S4-6, S2-3.	66	80	72	72	rfci5, cccu9	cccu8..cuci6. dcicu5			
	22	94, 96	89, 84	29.90	S1-2, S3-4.	S3-5, S3-5, S3-5.	70	77	70	72	rf10, cc10	cc8...cccu10..cucc9	spr	ths, W & N	L. ..Ths.
Mon.	23	79, 80	75....73	29.76	sw1-2, s2-3, sw4-6	SW2-4, SW1-2..	64	85	78	76	cccu7, cc9	cc3....cicu2....cu1	spr		
Tues.	24	90, 01	98, 02	29.96	N3-5, N4-6,	N4-6, N4-6, N1-2	52	70	67	63	ci3......ci3	ci3....ci3....cis3			
Wed..	25	08, 15	06, 05	30.10	W0-1, W1-2	W1-3, W3-4, w1-2	42	74	70	62	0......0	0......0......0			
Thurs	26	97, 98	90, 90	29.94	0....SW2-5	SW2-5, S3-5, S3-4	48	73	66	62	cis2....cidcistr4	ccdci9...cc10...cc10			
Fri..	27	86, 86	74, 73	29.79	S2-3, S4-5.	S4-6, S4-5, S2-4.	65	78	73	72	cc8......cc9	cc9..cccu9..dciccs4		spr	
Sat...	28	68, 63, 65	59, 48, 56	29.58	S1[illegible], S2-3, SE3-5	S4-5, Sw2-4, w2-3	69	77	67	71	cc9......ccn10,	ccn10. ccstr7..cucis3	spr....R..	spr, shr, ths	L
	29	65	85, 87, 95	29.80	W0-1, N3-5	N4-6, N4-6, N4-5	50	57	48	52	ccs3....cc10	cc10....cc10....cc10			
Mon.	30	07, 18	06, 10	30.09	0....N3-5	N3-5, N3-4, N1-2	37	62	58	52	str......0	0......0......0	frost, light.		
Tues.	31	18....28	25, 26	30.23	0....N1-2	N1-3, NW1-3..0	38	72	69	60	cc4......0	0......0......0	frost		

Amount of clouds as 5.28 is to 10.

Max. range, 30'45; min., 29'48. 30'00.0[illegible] mean for the month. 68°64 mean for the month. Max. range, 85°; min., 37°.

Thermometer behind a pillar about ten inches square, on a gallery fronting about SW, and protected (March 3d) from reflection so that the exposure as a whole is very fair.

GENERAL REMARKS.—1st—A beautiful day. 2d—Do. 3d—Thermometer protected from reflection; exposure fair. 6th—Light rains. 9th—Light rains. First mention of the Ci. cloud in a diffused form. 14th—Locust trees in blossom. 15th—Light rains. 16th—Dwarf Pear tree in blossom; 8½ A. M. Ths. to SW. 19th—China trees in blossom. 20th—6 to 7 A. M. fog running slowly; 7 to 8, descended; 8 to 9 lifted. 22d—Strawberries in market first time. 24th—A real Spring Norther. 26th—9 A. M. [illegible]xing for rain to-morrow. 28th—Peculiar action of Barometer. 31st—Dewberries in market first time.

NB 707

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